Northern Centre for Healthcare Research

The professionalized patient

Sociocultural determinants of health services utilization

J.F. Alberts

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Stellingen

behorende bij het proefschrift "The professionalized patient; sociocultural determinants of health services utilization" van JF Alberts.

1 Medicalisering van het dagelijks leven leidt ertoe dat mensen hetzij een protoprofessionele houding aannemen hetzij het vertrouwen verliezen in hun eigen lekenkennis en beoordelingsvermogen.

2 Het verhoogde gezondheidsbewustzijn van geprotoprofessionaliseerde mensen gaat samen met een verminderde tolerantie voor alledaagse klachten.

3 Hoewel het aanbieden van vrije geneeskundige zorg aan patiënten uit de lagere sociaal-economische klassen het middel bij uitstek lijkt om gelijke toegankelijkheid van de gezondheidszorg te waarborgen, wordt het effect ervan op Curaçao teniet gedaan door factoren in de organisatie van de zorg die juist ongelijkheid in toegankelijkheid veroorzaken.

4 Deprofessionalisering van de medische beroepsgroep zal eerder aan een rechtvaardige verdeling van gezondheidszorg bijdragen dan proto-professionalisering van de bevolking.

5 Met de ontwikkeling van toegepaste kennissystemen komt het kennismonopolie waarop de medische professie haar bestaansrecht baseert op losse schroeven te staan. (*Naar: Marie Haug, 1988*)

6 De rol van de mondige patiënt die weloverwogen meebeslist over behandelingsalternatieven staat op gespannen voet met de rol van de lijder die bereid is zijn hoop te vestigen op alles wat een kans op genezing in het vooruitzicht stelt. (*Naar: Henk Mulder, 1996*)

7 Waar het werk van de vroegere medisch sociologen zich kenmerkte door theorievorming met weinig empirische onderbouwing, kenmerkt de hedendaagse medische sociologie zich door multivariate analyses met weinig theoretische onderbouwing.

8 De uitspraak van Bill Gates, gedaan in 1981: "640 K ought to be enough for anyone", illustreert dat men niet te snel tevreden moet zijn met wat men heeft.

9 Het drinken van whisky-cola betekent niet zozeer een gebrek aan respect voor de whisky als wel een bijzondere statusverhoging voor de cola.

10 Het heeft geen zin om tegen de muur te lopen zolang men de optie heeft er overheen te klimmen. (*naar Sophie B. Hawkins: These walls are high, but I was born to climb, I've got a monkey mind*)

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door

Jantina Flora Alberts
geboren op 17 maart 1964
te Delfzijl

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Voorwoord

Dit proefschrift is gebaseerd op data van het Gezondheidsonderzoek Curaçao, een samenwerkingsproject van de GGD Curaçao, afdeling Epidemiologie & Onderzoek, en het Noordelijk Centrum voor Gezondheidsvraagstukken van de Rijksuniversiteit Groningen.
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Tineke Alberts,
Curaçao, juni 1998.

Contents

1 Introduction

1.1 Background and objectives

Since the 1960s an impressive amount of policy driven research on differences in utilization of health services has been undertaken. Most research activities are grounded in a widely supported and advocated health policy objective: the attaining of equity of access to health care. This objective, which has been set out in the Targets for Health for All by the year 2000 of the World Health Organization (WHO, 1985), is based on an international consensus that all people have a right to health care regardless of their ability to pay for this care.
Many definitions and criteria related to equity have been formulated, and little consensus has been reached on what is meant by equity in health care. However, most authors in this field agree that there are three important aspects to equity (see, for example, Aday and Andersen, 1974; Mooney, 1983; Illsley and Svensson, 1986; Andersen, 1995; Krasnik, 1996).
First, it is important to discern equality of access from equality of use. Equality of access is about equal *opportunity*; whether or not that opportunity is utilized is not relevant to equity defined in terms of access. Second, equity of access is about equal access for equal need. This implies that, since there are inequalities in need, resources have to be distributed unequally. Hence, there are two principles of equity: *horizontal equity*, "the equal treatment of equals", and *vertical equity*, "the unequal treatment of unequals according to their inequality". Finally, the aim of equal access for equal need is to attain *equity in health*, which is not the same as equality in end-of-state health. In this context, it is important to realize that there is 'given' inequality in health -between different age groups, for example- against inequality in the conditions shaped by society to reach the optimum level of health.
In short, equitable health care is ultimately aimed at offering people equal opportunity to attain their full health potential, and equity of access may be considered in the context of whether those persons actually in need of health care receive it.

If utilization of health care were purely a clinical phenomenon, then it would be sufficient simply to take an inventory of health needs or diseases and provide the suitable preventive and curative health services. However, objective pathology or disease is neither a necessary nor a sufficient condition to prompt the use of health services. Understanding differences in health services use requires that attention be paid to the demand for health care and to individual behavior patterns (Alonzo,

1979; Akin et al., 1986). According to Mechanic (1979) the main task for the behavioral scientist is:

> "to understand why persons with similar complaints behave so differently and why the same person with comparable symptoms at various times chooses to seek medical care on one occasion but not on another" (p. 394).

The personal, social and environmental variables that have been suggested to determine the demand for and use of health services seem numerous and complexly interrelated. The challenge for research is not only to uncover the various factors that influence health services utilization, but also to explain their interrelations, thereby giving health policy a tool for interventions.
To be of possible benefit for the guidance of interventions, research should *first* place these variables within a testable theoretical context. For example, a widely asserted belief is that poverty is one of the stronger predictors of delayed help seeking (Facione, 1993). But is it poverty itself, or is it the associated lack of medical knowledge or lack of health care access that is at the root of the relationship? Only research based on hypotheses guided by a sound conceptual framework can create a better understanding of how and where policy interventions should take place. *Second*, the intervention potential for a given conceptual framework depends not only on the extent to which it is important in determining use of services, but also on the extent to which the variables in the framework can actually be altered to influence the use of services. This concept of *mutability*, introduced by Andersen and Newman (1973), allows us to identify policy relevant variables for programmatic purposes. These variables can be distinguished from outcome or dependent variables (e.g., use of services) and from variables, which also affect the outcome variables but are not amenable to change by public policy (e.g., sex, ethnicity, age).

The objective of this thesis is to explain differences in health services utilization and differential use of care for similar health problems. Underlying this theoretical objective is a policy driven aim to understand differential access to health care in Curaçao and to suggest ways to achieve equity of access. The perspective taken in this thesis is a sociocultural one. An individual's sociocultural background underlies knowledge, attitudes, beliefs and behavior. With respect to the subject of health, the sociocultural background provides a context for the individual's identification and perception of health problems, and subsequent illness behavior. In the process of help seeking, the individual is influenced by the prevailing norms and values regarding medical affairs held by his or her social environment.
This introductory chapter elaborates on the theoretical background of the study. We first position the use of formal health services within the

broader process of illness- and help-seeking behavior. The chapter continues with a description of various approaches in the research on determinants of health services use, and a theoretical underpinning of the choice for a sociocultural perspective. Next, we discuss the integrative models underlying the conceptual framework of this thesis, i.e., Andersen's Behavioral Model of Health Services Use (Andersen and Newman, 1973) and the conceptual framework of the Curaçao Health Study. The chapter concludes with the presentation of a hypothetical model for the explanation of sociocultural differences in health services utilization.

1.2 The process of help seeking

Use of professional health services forms part of a broad array of illness- and help-seeking behaviors, ranging from absence from work, staying in bed and taking home remedies, to consulting literature, members of the lay network or more professionalized care providers.
Whether a health problem leads to use of professional health services, depends on a number of decision moments or selection processes. It is estimated that at least 70% of the occurring health problems are not brought to the attention of a medical professional (Furer and Tax, 1987). This phenomenon is well-known as the 'symptom iceberg' (Hannay, 1979).
The determinants of help seeking are part of a dynamic process involving response and feedback from the environment. People with identical symptoms may behave differently depending on what is going on in their lives and on situational factors, such as their engrossment in and commitment to their daily activities, others' tolerance of assuming illness status and the appropriateness of restrained role enactment, and the individual's coping resources (Alonzo, 1979).
Various authors have tried to identify analytically distinguishable decision moments in the process of help seeking (e.g., McKinlay, 1972; Mwabu, 1986; Padgett and Brodsky, 1992). At least four stages can be distinguished: in the first place the person in question has to recognize that he or she has a health problem. Second, the person has to decide whether or not to seek treatment for the problem and third, the person has to decide on the source of treatment. Consulting a professional health care provider is only one of the alternatives. Finally, there is the decision, in light of previous treatment, whether or not to continue to seek further treatment.
Once the patient has entered the health care system, again various decision moments occur. To illustrate this: for a hospital admission to take place, the patient must first decide to see a physician. In some health care systems, for example the one under study, the general practitioner

(GP) is the 'gatekeeper' to health care. In that case, the GP has to decide to refer the patient to a specialist. Next, the specialist has to decide whether an admission is indicated. In other words: the moment a patient enters the medical circuit, the extent to which he or she uses health services may be mainly determined by the providers of care.
In accordance with these observations, Andersen and Newman (1973) pointed out that the *type* and *purpose* of health services utilization, as well as the *outcome measure* to be analyzed, are important dimensions, because the (configuration of) the determinants of use might vary considerably, depending on these characteristics.

- *Types* of health services to be distinguished are physician, hospital, medication, etc.
- The *purpose* of utilization can be prevention, cure or care.
- The *outcome measure* can be the initial contact with a provider or the number or volume of services received during a given period. As was said before, the characteristics of the individual might be of primary importance in explaining whether or not any services are used. Characteristics of the care provider might be expected to be decisive in determining the overall volume of services. Except contacts and volume of services, one can also analyze illness episodes, which is interesting for the study of continuity of care, level of patient compliance and referral patterns.
  A fourth measure may be usual or general utilization behavior ('behavior patterns' or 'habit') instead of a single specific act of health care use. Many studies use explanatory variables of a rather general nature (such as general attitudes or beliefs of the individual) to explain one specific occasion of health care use, while it is not sure whether this specific act is representative of the normal behavior pattern of the individual. Stronger correlations might be found when the explanatory variables and the outcome variables have the same level of specificity (Fishbein and Ajzen, 1974; Furer and Persoon, 1987).

1.3 Approaches in the study of the use of services

The determinants of health services utilization have been the subject of many studies, applying various academic approaches. They have been analyzed in relation to the recognition and interpretation of illness, i.e., perceived needs for care; at the motivational level; through embeddedness in social relations, socioeconomic levels and other structural factors; and in view of economic forces that affect the demand for health services (Nagi and Marsh, 1980). McKinlay (1972), in a review of studies on the use of services, distinguished six theoretical approaches. Although McKinlay's review dates way back, his classification is still useful in

categorizing the vast literature on health services use to date. In this section, we discuss some of the research literature from each of the following theoretical angles:

- the economic approach
- the 'delivery system' or 'supply' approach (including McKinley's 'geographic approach')
- the social-psychological approach
- the sociodemographic approach
- the sociocultural approach

The economic approach

This approach emphasizes the importance of financial and other cost factors (time costs, transportation costs, etc) in explaining differences in the use of health services.

For economic models of health behavior the main starting point has been Grossman's application of the health production theory (Muurinen, 1982; Häkkinen, 1991; Wouters, 1992). In Grossman's human capital model, households strive for maximization of their welfare within the household budget constraints, using the available health services and other 'inputs' of health, which together form the health production technology environment. This process depends on the health production technology environment that is *available* and *known* to the household. The demand for health care is 'derived' from a situation where welfare maximization occurs within certain constraints and is determined by the health care's marginal productivity and its price relative to other health input prices and marginal productivities.

Programs directed at increasing the buying power of the consumer through universal or national health insurance are being debated as a remedy to overcome the financial barriers in access to medical care and to promote equity of access (Adler et al., 1993; Rubin and Koelln, 1993). Indeed, numerous studies have shown that people who are not insured for medical expenses use fewer health services, and have lower health status and more unmet needs than insured people (Paul and Maharaj, 1989; Häkkinen, 1991; Patrick et al., 1992).

It is sometimes suggested that the *type* of health insurance also plays a role. Some studies among USA populations (Nagi and Marsh, 1980; Aday et al., 1993) found that having private insurance appears to be a weaker predictor of health services use than public coverage (Medicaid and Medicare). The observed difference in utilization patterns between individuals with private and public insurance may be a question of financial considerations, in that private policies are more likely to have limited benefits or substantial cost sharing provisions for care. On the other hand, this finding may also be related to the fact that Medicaid and

Medicare are provisions for the elderly and individuals of lower socioeconomic status, who can be expected to have more health care needs. This assumption is supported by the finding of Nagi and Marsh (1980) that *unmet* needs for care were more prevalent among Medicaid recipients than among privately insured subjects.

An outstanding example of research on the effects of cost sharing on services use is the RAND health insurance experiment (Manning et al., 1987). The experiment was initiated to assess how demand for care responds to insurance-induced changes in price. Families participating in the experiment were randomly assigned to a prepaid group practice or to different fee-for-service insurance plans with varying levels of cost sharing. The research outcomes clearly showed that the use of medical services responds to changes in the amount paid out-of-pocket. Nevertheless, the authors argued that the effects of co-payment on the demand for care are relatively modest: it was estimated that the spread of health insurance in the USA in the past decades (i.e., the lowering of financial barriers to care) can account for only a modest portion of the postwar rise in health services utilization. Apparently, consumers are willing to pay for much of the increase in medical expenditure.

In any case, financial and other cost factors appear not to be the binding constraint on the decision to use professional health services. Many health care demand studies find low price sensitivity in the choice of whether or not to seek any medical care regardless of income (Wouters, 1992). In Kenya, patients can choose between the public system of health services, consisting of a hierarchy of health facilities all free of charge on the one hand, and several fee-for-service facilities on the other hand, such as mission clinics, private clinics and traditional healers. Compared with all other forms of care, the public care system was not the major source of treatment for the patients in a study by Mwabu (1986). Similarly, in a study in the Philippines, Akin et al. (1986) found that almost half of the sample under study used private modern or traditional fee-for-service health care instead of the public system of free clinics and hospitals. The authors therefore conclude that financial considerations may not be the most important determinants of use.

A probable explanation for these findings is that removal of financial barriers alone does not guarantee accessibility of medical care. Organizational factors also play an important role, such as the ratio of physicians to the population in a certain area. It may be that, in the case of Kenya and the Philippines, the needs of the population were not sufficiently met by the public services. Moreover, more subjective aspects of access also need to be taken into account, such as people's satisfaction with care (Aday and Andersen, 1974; Sherbourne et al., 1992; Sisk et al., 1996), and their perception of the quality of the care delivered. For example, Paul and Maharaj (1989), in their study in a Jamaican suburb where community members have access to a mix of public and private

health services, noted that private services are often considered by the consumer to be of better quality than public health centers.
A major limitation of the economic approach is that it assumes an efficient demand for health care by a rational individual, by that ignoring any cultural influences or social processes. Even among individuals who technically have equal access, true access may differ, for some may be more skilled in dealing with bureaucracies and social systems, and may be more efficient in obtaining care when needed than others. The proof of access per se is not the availability of services or resources, but whether they are actually used by the people who need them.
It is therefore perhaps not surprising that economic models have so far not been very successful in explaining differences in health care use (McKinlay, 1972; Akin et al., 1986; Wouters, 1992; Adler et al., 1993).

The 'delivery system' or 'supply' approach

This approach is concerned with the availability -volume and geographical distribution- and organizational characteristics of health services, which can be grouped together under the heading 'supply factors'.
Aspects of availability that have been found to determine the use of health services are the provider-to-population ratio, geographical proximity of the nearest care provider, and the presence of a particular provider who is considered the patient's regular source of care (Andersen and Aday, 1978; Häkkinen, 1991, Aday et al. 1993).
A significant share of health care use depends on the decisions of providers and is generated by provider-patient contacts. Inequities in accessibility of health services may in part be due to providers' attributes and practice style. Illustrative are the many studies that have established large variations in rates of surgical procedures that could not be explained by differences in the prevalence of relevant pathology. These studies provide strong evidence that surgical rates do not so much correlate with need, but rather with the demand for surgery whether that be physician or patient initiated (Hulka and Wheat, 1985).
McKinlay (1972) emphasized the importance of differences in orientations between providers and patients in terms of social class levels and bureaucratic organizational factors, which are likely to make it difficult to provide groups of lower socioeconomic status (SES) with effective health care. In the years following McKinley's review, a large literature on the association between SES, health, and the use of health services has accumulated, but relatively little has been published on the association between SES and decision making by care providers once the patient is in the health care system. A study by Scott, Shiell and King (1996) provided evidence supporting the assertion that patients' SES is

associated with GP decision making: patients of higher SES were more likely to have a test ordered, whereas patients of lower SES were more likely to receive a prescription. These differences in GP decision making may reflect differences in communication between the GP and patients of lower and higher SES. The authors argue that doctors are known to be influenced by expectations of patients in the belief that patients regard the extent of diagnostic testing as an indicator of the quality of medical care. People from lower SES backgrounds are likely to be more reserved and diffident about expressing their preferences, while individuals of higher SES will take a more active, inquisitive and demanding role. Consequently, physicians will more readily comply with the expectations of their higher SES patients.

In a review of the literature on patient and provider delay, Facione (1993) raises the issue of racial and cultural bias in provider delays; several studies of the use of health care by black Americans suggest that (covert) racial biases might remain in many health care environments. In the UK high rates of compulsory mental hospital admissions have been reported among Afro-Caribbean patients as compared with Caucasians. In a study by Morley, Wykes and MacCarthy (1991), comparing compulsory and voluntary admissions of Afro-Caribbeans, none of the expected differences in severity of illness, dangerousness to self or others, or attitudes of relatives were found. This led the authors to suggest that professionals may have unfounded expectations of dangerous behavior from Afro-Caribbean patients, and that psychiatric services may be more hesitant in providing voluntary treatment for this group.

Differences in the financing of services for different population groups are another potential source of provider bias; they may influence the time dedicated to the patient, the referral rate, and the number of follow-up consultations. This can be illustrated by comparing private health services, which are financed on a fee-for-service basis, with the public system of free medical care, which is financed through salaries and budgets (Hurst, 1993; Alberts, 1994). The services received from private health care providers are paid for directly by the patient. Third party insurers do not interfere in the 'negotiations' between patient and provider; compensation of costs goes around the fee-for-service flow. This mode of financing stimulates provider-induced demand; for the provider generating more (follow-up) contacts with the patient is lucrative.

In the system of free (prepaid) medical care only the service-flow remains between provider and patient. The provider receives payment in the form of a fixed salary or budget directly from the funding body; usually the government. This system holds few incentives for the provider to deliver high quality services. What we see here is sometimes referred to as an 'efficiency trap' (Hurst, 1993): when the provider delivers good work, he will attract more -and more satisfied- patients, but the resulting

growing workload will not be reflected in his or her compensation. The same holds true the other way around: bad performance will also not lead to financial sanctions. In other words: the succeeding of this system completely depends upon 'dedication' and 'professional ethics' on the part of the provider.
The effects of fee-for-service payment on providers' practice style were also demonstrated in the Rand Health Insurance Experiment. Participants in a fee-for-service plan (with no cost sharing) were equally likely to visit a mental health specialist in a year as compared with participants in an HMO (prepaid group practice), but incurred almost three times the costs. This difference was due to more visits per user, consultations of psychiatrists and psychologists rather than psychiatric social workers, and relying on individual rather than group therapies in the fee-for-service plan (Wells, Manning and Benjamin, 1986).

Results from the Medical Outcome Study (DiMatteo et al., 1993) show that the health care provider plays an important role in promoting adherence to medical treatment. Physicians' characteristics that were significantly related with adherence were: global job satisfaction and aspects of practice style, such as willingness to answer all questions of the patient, number of tests ordered, and making definite follow-up appointments.
Two critically important elements of the doctor-patient communication can be distinguished with respect to patient adherence (Garrity, 1981): the explicitness with which recommendations are made to the patient, including clarification of patients' questions, and the sharing of concerns and expectations regarding the recommended treatment or activity.

The social-psychological approach

In the social-psychological approach the individual and his personality, attitudes, knowledge and experiences are the center of attention. This approach is closely related to the sociocultural approach: an individual's attitudes, norms and values are largely derived from the prevailing attitudes, norms and values in his or her social network. Consequently, similar concepts and operational measures can be found in both approaches.
There is considerable empirical data indicating the importance of selected psychological factors in health services utilization.
Personality factors are supposed to tap individual differences in the perception of and attentiveness to symptoms and the individual's likelihood of seeking medical care. Especially neuroticism appears to be an important explanatory variable of perceived health and help-seeking behavior. A high degree of neuroticism has been related to a lower

estimation of one's own general health status, the reporting of more symptoms that are perceived as more severe, more psychological problems and a higher level of health services utilization (Sanderman and Stewart, 1990; Ranchor, Sanderman and Van den Heuvel, 1990).
A second relevant personality factor in the explanation of health-related behavior is the locus of control construct from Rotter's social learning theory. The theory proposes that people learn to relate their own behavior and the outcome of it, and consequently learn to increase their feelings of control over outcome expectancies. The locus of control reflects to what extent individuals expect to attain certain outcomes through their own behavior (internals) or expect that outcomes depend on matters beyond their control (externals). Many domain-specific operational constructs of the concept have been developed for use in various research areas. Besides, numerous and divergent human behaviors have been explained through locus of control, with varying success.
For their study into inequities in health Ranchor, Sanderman and Van den Heuvel (1990) used an adapted version of Rotter's general I/E-scale. Locus of control turned out to be one of the most important determinants of health services use, after health status, neuroticism, gender, attitudes concerning medical issues, and behavioral intentions, with externally oriented individuals exhibiting higher levels of services use than 'internals'. They found no significant relationship between locus of control and perceived health, in contrast with Furer and Persoon (1987) who found that an external orientation was related to a delayed recognition of symptoms and less preventive behavior.
Wallston, Wallston and DeVellis (1978) developed a Multidimensional Health Locus of Control Scale, based on the notion that the explanatory and predictive power of the construct might be improved by discriminating between an external orientation on 'chance' and an external orientation on 'powerful others'. In their research an internal orientation correlated positively with perceived health; a chance orientation correlated negatively, and a powerful others orientation showed no correlation with perceived health.
Marshall (1991) developed a multidimensional scale for internal health locus of control beliefs. In his research only one of the dimensions, i.e., self-mastery, was significantly related to physical health and well-being. Marshall explains this as follows: the concept of self-mastery not only refers to the belief that certain potential behaviors have a positive outcome, but also to the belief that one is capable of actually carrying out these behaviors. Self-mastery combines both a belief in self-efficacy (Bandura, 1982) and the recognition of a potentially responsive environment.

Many researchers have focused attention on *attitudes, beliefs and behavioral intentions* regarding health-related matters to explain

differences in health services utilization (e.g., Hulka et al., 1970; Bice and Kalimo, 1971; Mootz, 1981; Ranchor, Sanderman and Van den Heuvel, 1990; Padgett and Brodsky, 1992). Fishbein and Ajzen (1975) assume that attitudes, beliefs and behavioral intentions separately influence behavior. Other authors, such as Mootz (1981) are of the opinion that the concepts are so closely related to each other that studying them independently is fairly impossible.
Several social-psychological studies have examined the intention to perform help-seeking behavior, rather than the behavior itself, by asking subjects to imagine a discovered sign or symptom and to indicate their likelihood of seeking care. The research in this field supports the assumption that a stated intention is highly predictive of actual subsequent behavior (see for a review Facione, 1993). However, actual behavior cannot be predicted completely by intentions, because the behavior is not under total control of the individual. Given the many factors that can disturb the intention-behavior relation, intentions can merely predict an individual's attempt to perform certain behavior, and not necessarily the eventual behavior (Scaf-Klomp, 1997).
Much of the social-psychological research on preventive health behavior has been guided by the Health Belief Model (Rosenstock, 1966). According to the original model four factors determine health behavior. The first two factors define whether a state of readiness to act exists, i.e., the perceived susceptibility (the subjective risk of contracting a condition) and the perceived seriousness of the condition. Susceptibility and seriousness may provide a force leading to action, but it does not define the course of action that is likely to be taken. The direction of the action is influenced by the third and fourth factors: the perceived benefits of taking a particular course of action and the perceived barriers to complete the action. Finally, a stimulus or 'cue to action' is needed to engage people in the specific activity. Such cues can be internal (e.g., perception of symptoms) or external (e.g., interpersonal interactions, impact of media, or an invitation to participate in a screening program).

Knowledge of health-related matters is also a relevant variable in the study of health services use. Knowledge is a prerequisite to be able to make a considered choice between behavior alternatives. The level of health-related knowledge is closely related to educational level, and can be considered as a consecutive aspect of SES (Farrow, Charny and Lewis, 1990; Tax, Furer and König-Zahn, 1990).
Medical knowledge has also been argued to be a determinant of adherence; non-compliance may be the result of a discrepancy between professional and lay knowledge (Bernts, 1991). However, health-related knowledge is most probably not the most important determinant of adherence. Lack of knowledge may be counteracted by the meaning of symptoms, by extensive experience of illness, by social conditions that

facilitate the acceptance of continued medical care, or by attitudes conducive to compliance (McKinlay, 1972).
Other social-psychological factors affecting utilization behavior are: fear or anxiety, which appears to have a curvilinear relationship with health services use (Ben Sira and Padeh, 1978; Spielberger, Sarason and Defares, 1988) and coping strategies, with 'problem-focused' strategies (danger control behavior; dealing with health threats) leading to more adequate help-seeking behavior than 'emotion-focused strategies' (fear control; avoidant behavior) (Sherbourne et al., 1992; Birkimer, Johnston and Dearmond, 1993).

The sociodemographic approach

This approach relates the use of health services to sociodemographic factors such as age, sex, religion, ethnicity, and marital status. A drawback of studies, applying this approach is that they mainly identify and describe variables relevant to use, but hardly have any explanatory power. What is needed is a better understanding of why certain demographic variables are associated with use of health services in a particular study. For example, several studies have been published that report relationships between ethnicity and help-seeking behavior. There is evidence that ethnicity is related to delayed help seeking, non-urgent use of emergency rooms and decreased survival (Padgett and Brodsky, 1992; Facione, 1993). However, these studies fail to differentiate the confounding or mediating effects of differences in supply of health care, knowledge, attitudes, beliefs, social support, etc. A second limitation of this approach is, that demographic variables are not amenable to change, and offer little opportunity for policy interventions.

Another line of research within the sociodemographic approach concentrates on socioeconomic status (SES) as determinant of health services utilization (Mackenbach and Van der Maas, 1987). The concept of SES can be seen as a multidimensional indicator of certain interrelated demographic, economic, and sociocultural attributes, which determine an individual's power, esteem or prestige in the stratified structure of society (Van Berkel-Van Schaik and Tax, 1990). Given the multidimensionality of SES, this line of research also draws from the sociocultural and social-psychological approaches (Van den Heuvel, 1987).
The relationship between SES on the one hand and health and help-seeking behavior on the other hand is rather complex, because several intermediate variables are at work in the causal sequence. The relationships between SES and health status have been well documented in the international research literature for many years. A lower SES is

consistently related to higher rates of morbidity and premature mortality (an extensive review can be found in Van der Lucht, 1992).
Findings on the relationship between SES and health services use are less clear. One might expect that, since lower SES is related to higher rates of morbidity, people of lower SES would make more extensive use of health services. However, the association between SES and health services utilization is not unequivocal. Lower SES appears to be related to more use of health services for diagnosis and treatment (curative services), while higher SES appears to be related to more use of preventive services, such as dental services and screening programs (Wan and Odell, 1981; Illsley and Svensson, 1986; Adler et al., 1993). Moreover, the relationship between SES en curative health services use appears to vary with the type of health service under study. Several studies have shown that, when inequalities in health are taken into account (i.e., under conditions of equal need), people of higher SES are *more* likely to consult specialists and physiotherapists, and to be hospitalized, whereas the use of general practitioners is fairly equitable (Ooijendijk en Schaapveld, 1992; Van den Bos and Lenior, 1992; Van der Meer, Looman and Mackenbach, 1994; Newbold, Eyles and Birch, 1995). Such socioeconomic inequalities in use of health services may be related to both inequalities in the supply of services and differences in the demand for services between people of lower and higher SES.

The sociocultural approach

Studies applying this approach assume that people's help-seeking behavior is influenced by their social environment, and the prevailing norms, values and beliefs regarding medical affairs. Also taken into account is the fact that in the process of help seeking the individual is usually confronted with advice and comments from others that influence his or her decisions.
Suchman (1966) and Freidson (1970) were among the first researchers who demonstrated that the health orientation or value system to which the individual adheres ('lay culture'), and the structure of the group to which the individual belongs ('lay system' or 'social network') are significant determinants of the demand for and use of health services.
As for the *lay culture*, it is important to note that the demand for, and supply of health care takes place in an interaction between two cultures: the lay culture of the patient and the professional culture of the health care provider.
De Swaan's (1979) theory on proto-professionalization focuses on the compatibility of the lay culture with the culture of modern medicine. In his study of the use of psychotherapy, De Swaan found that among the people who presented themselves at the consultation hours there were

many young adults with a higher education, who were employed in scientific professions. This led De Swaan to hypothesize that inequalities in people's social nearness to (medical) professionals -or: inequalities in the cultural gap between lay members and professionals- leads to inequalities in the use of professional services. He argued that people who are socially near to professional circles or networks, be it through work or through informal contacts, will sooner pick up the knowledge and attitudes of that profession, and will to a certain extent reflect upon their daily experiences in the same way as that profession does. He called this process of proliferation of the professional culture into the lay culture 'proto-professionalization'.

There is a vast literature on (sub)cultural differences in symptom identification and illness behavior. For example, studies by Zola (1973) and Segall (1976) showed that Anglo-Saxon Protestants, Jews, and Irish and Italian Catholics differed distinctly regarding their attentiveness to and tolerance for minor symptoms. Studies on lay concepts of health by authors such as Blaxter (1983), Cornwell (1984), D'Houtaud and Field (1984), and Cockerham and colleagues (1986a, 1986b) have yielded valuable insights in cultural differences between social classes with respect to perceptions of health and help-seeking behavior.

The lay culture may also influence help-seeking behavior on a more general level. Whereas certain societies may consider particular symptoms as signs of illness, these same symptoms may be regarded in other societies as ordinary and natural. For example, it is sometimes suggested that Caribbean and Latin-American communities, which are more accepting of the supernatural and mystic experiences, may tolerate relatively minor signs of mental illness more easily than Western communities (Morley, Wykes and MacCarthy, 1991; Araya, Wynn and Lewis, 1992).

Beliefs in magic and interpersonal sensitivity -the belief that ill-disposed others may exert negative influence on someone's health- may lead a patient to believe that his or her health problem could be due to a curse or a spell and not to what professionals call 'disease'. In this case patients could choose to move from modern medicine to traditional healers, or could assume a powerless, externally controlled orientation and resign themselves to their fate (Arrindell, Van Faassen and Pereira, 1985; Wouters, 1992; Alberts et al., 1993).

The role of the *lay system or social network* in relation to illness and illness behavior has been the focus of considerable interest in the past decade. There is growing evidence that health maintenance and recovery from illness can be influenced significantly by a person's access to supportive others (Cohen and Wills, 1985; Sarason et al., 1987; Van Sonderen and Ormel, 1991).

With respect to the relationship between social support and the use of health services, the social network not only functions as 'lay referral system' (Freidson, 1970) or for 'lay consulting' (Kooiker, 1996), but it can also play an active role in providing the care needed. Research into this relationship mainly concentrates on the role lay care plays besides or instead of professional care. Attention is mainly focused on instrumental support and the capacity of the social network to offer the required care (Van Sonderen, 1991).

Conclusions

The sociodemographic approach and the economic approach appear to have limited value for the study of inequalities in health services utilization. The sociodemographic approach falls short of explanatory power, in that it mainly identifies and describes inequalities in use, e.g., between sexes or ethnic groups, but that it fails to differentiate the effects of mediating variables. Unless a health care system is biased toward females or blacks, these demographic variables do not put up barriers to access. They are, however, related to other factors that influence access, such as financial resources, knowledge and attitudes, or cultural factors. The economic approach fails insofar that it assumes an efficient demand for health care by a rational individual, by that ignoring any cultural influences or social processes. Obviously, financial resources are essential for access to health care: consumers of care need to have 'buying power', be it through income, private insurance plans, or through the availability of free public health care. Nevertheless, financial and other cost factors appear not to be the binding constraint on the decision to use health services.

The 'delivery system' approach does offer an important base for the study of inequalities in access to health care. It needs no discussion that system barriers, such as an unfavorable provider-to-population ratio for certain population groups, are major causes of inequalities in access. Likewise, decisions and treatment practices of care providers can generate inequalities. However, the effects of these supply factors on inequalities in access are beyond the scope of this thesis, which concerns a population-based study, and is therefore focused on the demand for health care.

As we already noted, the sociocultural and social-psychological approaches are closely interrelated: similar concepts and operational measures can be found in both approaches. These approaches offer a useful theoretical starting-point for our study. More in particular, the sociocultural concepts of lay culture and proto-professionalization seem important in explaining variations in the demand for health care, since they incorporate many social-psychological and sociocultural elements,

such as knowledge, beliefs, sense of control, and network characteristics. Individually, these elements have been proved to be important determinants of use, but their interrelations and their collective effects on health care use are less clear. In other words: the concepts of lay culture and proto-professionalization appear to offer a good starting point for an integrative approach to the study of health services utilization.

1.4 Toward an integrative approach

In the literature on determinants of health services utilization a great deal of large multivariate studies can be found; most researchers apply elements from the different approaches. However, a limitation of many of those studies is that they lack a sound conceptual framework. Consequently, study results are often confined to a mere identification and enumeration of variables influencing health services utilization, with little explanatory power regarding interrelations and causal sequences. This, notwithstanding the fact that several useful integrative conceptual models have been developed. At this point we will restrict ourselves to a discussion of the ones underlying our own research model, i.e., the Andersen model and the conceptual framework of the Curaçao Health Study.

A well-known and widely applied conceptual model is Andersen's Behavioral Model of Health Services Use (Andersen and Newman, 1973; Aday and Andersen, 1974; Wolinsky and Coe, 1984; Van den Heuvel, 1988; Kempen and Suurmeijer, 1991; Howard-Caldwell, 1996). In this model the determinants of use are not ordered as regards their conceptual similarity, but according to the way they affect use. The model considers the use of health services to be a function of three classes of variables, i.e., *predisposing*, *enabling* and *need* characteristics of an individual. An individual's predisposition to use health services is reflected by his or her sociodemographic, social-structural, and attitudinal-belief characteristics, all of which exist prior to the onset of an illness episode. The enabling variables in the model refer to conditions that facilitate or impede the use of services by an individual who is predisposed to seek care. Enabling conditions can be measured by family resources (income; health insurance; etc.) and community resources (professional-to-population ratios; geographic location; etc.). The need variables represent the most immediate cause of health services use; they comprise symptoms and diagnoses, functional limitations (disabilities), and perceived health status. According to Andersen and Aday (1978), both direct and indirect effects can be distinguished. The predisposing variables may influence utilization directly as well as indirectly by affecting the enabling and need variables. The enabling variables may influence utilization directly as well as

through the need variables. The need variables are supposed to have direct effects on utilization.
One could question the appropriateness of this causal ordering; it could be argued that need is not only preceded by predisposing and enabling factors, but that the relationship between need and use is mediated by these factors as well. For need to lead to use, the need has to be translated into a demand for health care and the services have to be accessible.
Setting aside the disputable interrelations between the components, the model appears to be very useful for policy and programming purposes. The enabling variables (which are central in the economic and delivery system approaches to the study of services use) represent existing political options for reducing financial and system barriers in individuals' access to health care. Andersen and Newman (1973) in fact posed that, since the enabling variables are the most mutable ones, it appeared more feasible for policy to bring about change through these variables than through the predisposing variables. In taking that position, however, they overlooked the importance of the more subjective barriers to access that can be put up by predisposing variables, such as a person's socioeconomic position or sociocultural background. For example, as noted before, an individual's position in the SES hierarchy appears to influence his or her chances of having a test ordered by the GP, probably because people of higher SES take a more active and demanding role in the doctor-patient communication, thereby more strongly influencing GP decision making (Scott, Shiell and King, 1996). Although these subjective inequities may be less mutable than financial inequities, health policy aimed at attaining equity of access to care, cannot pass over them.
The Andersen model has been criticized because a number of studies applying the model found low total explained variance in service use, with the need variables explaining almost all variance (see for example Mechanic (1979) and Andersen (1995)). However, these disappointing results may be largely due to methodological flaws of the studies in question. Other studies with more refined operationalizations and designs, such as the studies by Wolinsky and Coe (1984) and by Kempen and Suurmeijer (1991), found considerable higher percentages of total variance explained, although the need variables still explained most of the variance, which in itself is logical since need variables present the most direct cause for services use. Some authors consider the dominant role of the need variables as determinants of use to be proof of equitable access to care (Andersen and Aday, 1978). On the other hand: increasing the accessibility of health care systems to the point where enabling and predisposing variables would be expected to be irrelevant, may be rather utopian.
In the present study, we focus on the effects of predisposing factors on access to health care, i.e., we analyze the extent to which socioeconomic,

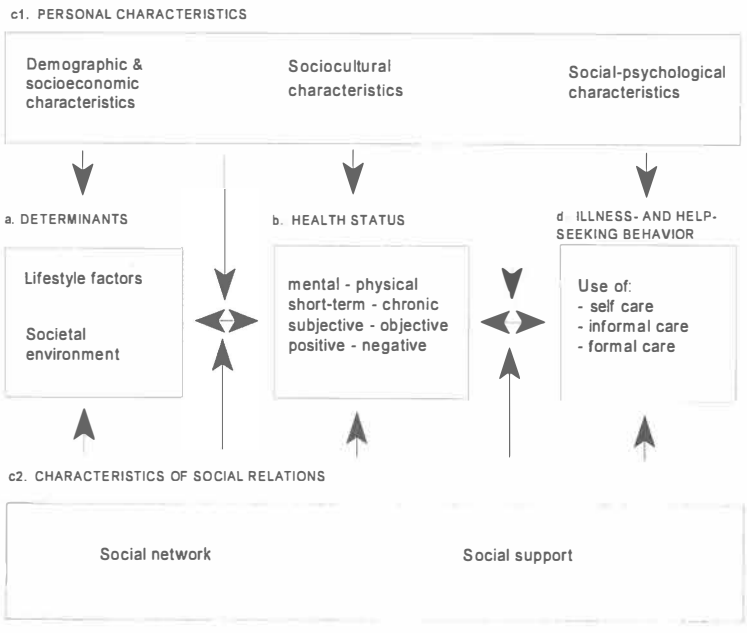
social-psychological, and cultural variables constitute 'subjective' barriers to equal access.

The second integrative model underlying this study is the conceptual framework of the Curaçao Health Study (Alberts et al., 1996). This framework is derived from the theoretical model developed by the Dutch Programming Committee on Determinants of Health (Van den Heuvel and Sanderman, 1991; Sanderman, Van den Heuvel and Krol, 1995). The framework comprises the following elements (Figure 1.1):

a Determinants of health: these are variables that are directly related to health status, either as causal or as risk factors for disease, or as chance factors that contribute to good health. Important determinants are aspects of lifestyle (e.g., smoking, eating habits, exercise) and of the societal environment (e.g., living conditions). Additional determinants, that are left out of consideration in this model, are constitutional aspects (e.g., hereditary factors) and aspects of the physical environment (e.g., toxicological factors).

b Health status: a multidimensional concept comprising chronic and short-term, physical and mental, objective and subjective, and positive and negative aspects.

Figure 1.1
Conceptual framework of the Curaçao Health Study



c Mediating variables: these variables intervene in the relationships between determinants and health status and between health status and help-seeking behavior. In the model two sets of mediating variables are distinguished:
1. personal characteristics, including SES and demographic, sociocultural, and social-psychological factors
2. characteristics of a person's social relations, including both structural aspects ('social network') and functional aspects ('social support').

d Illness- and help-seeking behavior, comprising a broad range of activities. For programmatic and policy purposes, use of formal health services, is the most important one of these.

The conceptual framework of the Curaçao Health Study primarily has a heuristic value: it serves for the structuring of the train of thought, but testing all the suggested interrelations between the factors simultaneously is practically impossible. Moreover, the framework was developed, not only for the explanation of differences in health services utilization, but also for the study of differences in lifestyle and in health. Since this thesis focuses on variations in health services utilization, the determinants of health are left out of consideration.

The significance of the framework for this study is that it shows that having health problems does not necessarily lead to a demand for health care. The relationship between need (health status) and care use is mediated by an individual's demographic, sociocultural and social-psychological characteristics, and by characteristics of his or her social relations. These mediating variables not only influence the choice of help-seeking behavior, but already assert their influence in the phase of recognition and identification of health problems. The framework also shows that the relationship between need and use is reciprocal: use is both a determinant of health and an outcome of health problems. However, in this thesis we will consider use solely as an outcome measure.

1.5 A hypothetical model for the explanation of sociocultural variations in health services utilization

Based on Andersen's Behavioral Model and on the theoretical framework of the Curaçao Health Study, a hypothetical model for the explanation of variations in health services utilization was developed (see Figure 1.2). The extent to which an individual is free to decide whether or not to consult a professional will first be determined by the urgency and perceived danger of the health problem and the nature of the condition. Other determinants of health services utilization will exert stronger influence -or will only start to have influence- when there is no

immediate urgency to call upon medical care; an individual will have more leeway to decide upon a dental checkup, than to take the treatment of an arterial bleeding into consideration.
Secondly, a given health problem will be more or less perceptive to an individual, depending on the subjects' relative familiarity with the symptoms, and the 'commonality' of the health problem.
These two concepts of *illness danger* and *illness recognition* were first proposed by Mechanic (1962). This approach to illness suggests that persons perceive symptoms differently -a suggestion for which there is considerable support- and accordingly will behave differently[1].
An individual's (perceived) health status will be influenced by sociodemographic factors (e.g., age, gender, SES), and by sociocultural factors, such as health-related knowledge, sense of control, and characteristics of the social network, which together determine an individual's degree of proto-professionalization. The sociodemographic and sociocultural factors will also influence the individual's propensity to use health services. This propensity or behavioral intention is independent of the individual's actual (perceived) health. These three sets of factors can be looked upon as the predisposing characteristics in the Andersen model. Health services utilization will thus be an outcome of both the individual's (perceived) health and his/her predisposition to use health services.
The model focuses on the effects of predisposing sociocultural variables. We will not go into the specific effects of Andersen's enabling variables on health services utilization. Since it is widely recognized that financial and system resources are essential in attaining access to care, enabling characteristics will be treated as control variables.The relative importance of the various explanatory variables will vary according to the types of health services used and to the purpose of utilization.

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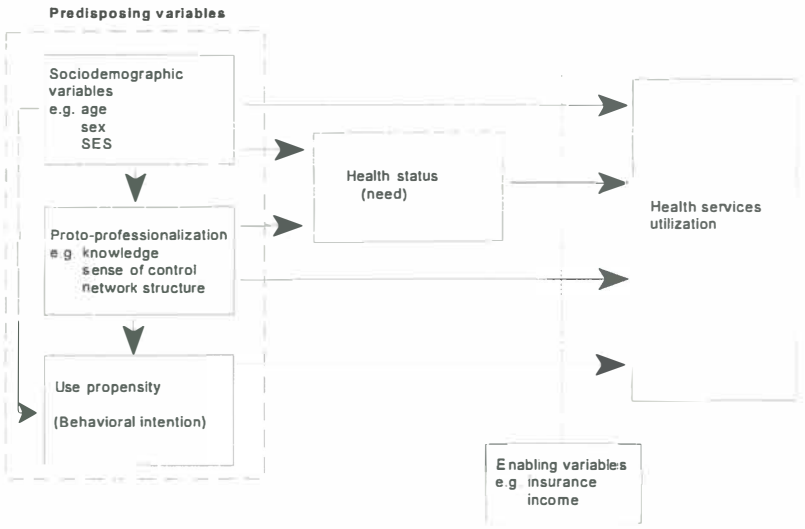
[1] In Mechanic's view (1979) health perception is incorporated in illness behavior, which he defines as 'the way in which symptoms are perceived, evaluated and acted upon by a person who recognizes some pain, discomfort or other signs of organic malfunction'. He argues that in many quantitative studies the indicators of 'need', such as perceived health and limitation of functional activities, contain too many subjective aspects, leading them to be highly correlated with sociodemographic, attitudinal and behavioral variables, and when introduced into multiple regression equations reducing the influence of the latter variables. Some authors solve this problem by treating perceived health and health services utilization as aspects of the same concept of 'health' (Ranchor, Sanderman and Van den Heuvel, 1990; Habbema, 1989), or by treating health as a latent variable (Häkkinen, 1991). In our hypothetical model we choose to treat health and utilization as seperate concepts, with explicit concern for the indirect effects of the various independent variables on health services utilization, and applying a multidimensional operationalization of 'need'.

Figure 1.2
Hypothetical model



The actual health status (or 'need') of the individual will, for example, probably have little influence on the decision to consult a GP for a general checkup, whereas it will be a strong predictor of a curative visit. On the other hand, a strong sense of control, a positive attitude toward health behavior and a supportive network are hypothesized to be strongly related to discretionary services use (i.e., directed toward conditions for which immediate care is not required), while these variables will probably exert less influence on the decision to seek a cure for a serious illness.

An important aspect of the type of health services used is the nearness of the services to the population, both in terms of entry - e.g. directly accessible primary care versus secondary care for which a referral is required - and in terms of familiarity. The threshold to visit one's own GP will be lower than to use relative unfamiliar services such as ambulatory psychiatric care.

The configuration of the explanatory variables will also vary according to the unit of analysis, e.g., incidence of health services use versus total volume of services received. As was said before, an individual's predisposing characteristics may be important factors in the decision whether or not to seek any care, but characteristics of the care provider may be more decisive in determining the overall volume of health services use.

1.6 An overview of the thesis

Chapter 2 gives a description of general patterns of health services use in Curaçao, and presents an analysis of variations in use by sex and age. In chapter 3, socioeconomic inequalities in the use of various health services are analyzed and discussed. Chapter 4 introduces the concept of proto-professionalization, and discusses the construction and validation of an operational measure of proto-professionalization. In chapter 5, the concept of proto-professionalization is incorporated as predisposing variable in Andersen's Behavioral Model. The unique contribution of proto-professionalization to the likelihood of services utilization is examined in a multivariate analysis of predisposing, enabling and need variables. In chapter 6, 'illness severity' is introduced as explanatory factor: we examine how the effects of sociocultural variables on health services use differ with varying need. Finally, chapter 7 presents a summary of the main study outcomes, a theoretical and methodological discussion of the results, and a discussion of the policy recommendations that follow from this study.

2 Patterns of health care utilization in Curaçao: a comparison with the Netherlands[1]

This chapter describes patterns of health care utilization in Curaçao, and compares these with patterns of use in the Netherlands. In general, the use of GPs, specialists and hospitals in Curaçao is similar to that in the Netherlands, but the use of dentists and physiotherapists is lower in Curaçao. The remarkable similarity in general levels of physician and hospital utilization in both populations contradicts the prevailing belief among health care professionals that health care utilization in Curaçao is very high, supposedly because of a well-nurtured culture of medical shopping. In both populations women have a higher average level of physician utilization than men. In Curaçao both sexes make about equal use of dentists and physiotherapy, whereas Dutch women use these services more often than their male counterparts. With increasing age, more people in both countries consult specialists and are hospitalized, while less people consult dentists. Young adults in Curaçao are also relatively infrequent users of dental services. In contrast to findings from the Netherlands, the use of GPs is not related to age in Curaçao. This is a striking finding in view of the fact that in general aging is accompanied by a higher need for medical care.

2.1 Introduction

Information about the prevalence of health services utilization is essential for the monitoring of the effectiveness and efficiency of health care, and the planning of health care reforms. Currently, major health care reforms are imminent in Curaçao, aimed at improving the quality of care, meeting the needs of the population, while better containing costs at the same time. Prevailing policy issues are, for example, budgeting in health care, substitution of costly specialized care by primary health care, reorganizing the care for the chronic ill, and the development of intervention programs for specific risk groups. A well-planned restructuring of health care in this sense requires insight into the current patterns of health care utilization, but up to now there were hardly any vital statistics available about utilization in Curaçao.
The aim of this study is to present a general description of health care utilization in Curaçao, and to explore demographic variations in

[1] JF Alberts, I Gerstenbluth, R Stewart, R Sanderman, WJA van den Heuvel. Submitted.

utilization. To gain insight in patterns of use, it is important to know, not only how many people use health care, but also which amount of care they use. Therefore, we will discuss both the incidence or *probability* of services utilization, i.e., the proportions of persons who have contact with the various health services in one year, as well as the *volume* of use, i.e., the numbers of consultations with those services.
A common belief among health care professionals and policy makers in Curaçao is that health care utilization is very high, and that cost containment policies should be directed at reduction of unnecessary medical shopping. On the basis of a general descriptive study of utilization patterns it is not possible to draw any conclusions as regards the recommended absolute level of use. However, it is possible to form a notion of the relative magnitude of care utilization, by putting the Curaçao situation in an international perspective. Hence, the utilization figures are compared with data on health care utilization in the Netherlands. Dutch reference data were chosen because there are strong political and historical ties between Curaçao and the Netherlands. For example, most health care professionals from Curaçao have received their vocational training in the Netherlands. Also, in many aspects the health care systems in Curaçao and the Netherlands are comparable. For example, in both systems the GP is the 'gatekeeper' to health care: usually, the first contact people have with health care is through the GP. Specialists are only accessible upon referral by a GP.

2.2 Methods

Subjects

Participants in the present study are inhabitants of Curaçao, a Caribbean island with a population of 144.000, located some 30 miles off the Venezuelan coast. Curaçao is one of the islands of the Netherlands Antilles which form part of the Kingdom of the Netherlands. The island has a multi-cultural and multilingual population, originating from at least 40 nationalities. The majority of the population are of African descent. Data were derived from the Curaçao Health Study (CHS), a health interview survey among the non-institutionalized population aged 18 years and older, which was carried out in 1993-1994. A randomized sample was drawn from the Registry Office. In total 2248 individuals were surveyed in face-to-face interviews by trained interviewers. The response rate, after excluding those who did not meet the inclusion criteria, was 85.3%.
To determine the representativity of the study sample, some demographic characteristics were compared to those of the non-institutionalized population of 18 years and older (Central Bureau of

Statistics, 1993). As regards geographical distribution and mean age, the study sample is representative of the population. The mean age of the study participants is 43.7 (range: 18-99 years). The sample consists of 57.2% women (95% CI: 55.0-59.2), which means that they are slightly overrepresented, for women make up 54.6% of the adult population. Full details of the study design and sampling procedure are reported elsewhere (Alberts et al., 1996).
Dutch reference data are derived from the Continuous Health Interview Survey by the Netherlands' Central Bureau of Statistics (CBS). The Dutch data also refer to the adult (18+) non-institutionalized population in 1994.

Instruments

Health interview surveys are internationally acknowledged as an important means to overcome the constraints of data derived from registries of health care providers (De Bruin, Picavet and Nossikov, 1996). The main constraint of such registries is that they are directed at specific aspects of the total health care system (e.g. hospital registries, registries of insurance companies). This leads to 'blanc spots' and a fragmentary picture of the supply and use of health care. Health interview surveys provide comprehensive and integrated information about people's use of the various health services, in relation to their sociodemographic and health characteristics.
To assess the use of health services, a questionnaire was used that was originally developed by the Central Bureau of Statistics in the Netherlands. Hence, it is possible to draw fairly reliable comparisons with the Dutch reference data. Wherever necessary, the questionnaire was adapted to the Curaçao situation. Only use of health services in connection with the participant's own health was assessed. The following health services were covered:
General practitioner - To determine the probability of GP utilization, the subjects were asked whether they had consulted a GP in the past year. Contacts with a GP included consultations during consultation hours and by phone, as well as house calls. When using this type of retrospective questions, recall effects have to be taken into account: the longer the recall period, the more contacts are forgotten, with an average of approximately 4% per week (Van den Berg, 1983). Consequently, for a reliable estimation of the volume of GP utilization, the reference period was restricted to the two weeks prior to the interview. For the analyses, the data were converted into an estimate of the volume of contacts in one year.
Specialist - This instrument was composed in the same way as the GP questionnaire, albeit that a distinction was made between contacts with

specialists in Curaçao and contacts with specialists abroad. Due to the fact that Curaçao is a small island, not all top clinical care is available, and in some instances patients are referred abroad. Therefore, it was important to also gain insight into the use of health services abroad. Use of specialists was limited to policlinical treatment; specialist care during hospitalization was excluded.
Hospital - This list is also composed in a comparable way, with again a distinction between hospital admissions in Curaçao and abroad. Being less frequent and more memorable occasions, the reference period for hospital admissions was extended to 12 months. Hospital admissions of women in connection with deliveries were excluded.
Dentist - The subjects were asked how often they had visited a dentist in the 12 months prior to the interview.
Physiotherapist - The subjects were asked how many contacts they have had in the 12 months prior to the interview.
Other services - The use of various other health services was measured by questions on how often they had been visited in the past 12 months. These services were:

- primary health care services (district nurses; social workers; dieticians)
- mental health care services (ambulatory care, psychiatric ward and hospital; psychologists; psychiatrists)
- alternative and traditional healers (homeopaths, acupuncturists, natural healers, faith healers, and other traditional healers).

Since no Dutch reference data were available on the use of 'other services' the international comparisons are restricted to the use of GPs, specialists, hospitals, dentists, and physiotherapists.

Analysis

To test for significant sex and age-related differences in proportions of health care users Chi-squares were calculated. Analysis of Variance was done to test for differences in mean numbers of consultations. In the light of the large sample size, a p-value of .001 was considered significant. However, also as a result of the large sample size, relatively small effect sizes are likely to be detected using this cut-off point. An effect size is comparable to the percentage of explained variance (Cohen, 1992). Because of the exploratory nature of the study the detection of small effects is considered acceptable.
To test for differences between the proportions of health care users in Curaçao and the Netherlands, 95% Confidence Intervals for the differences between two independent proportions were calculated. Differences between proportions of users in the two countries by sex and age, were tested for by combining the logarithms of the odds ratios. We

calculated Chi-squares for testing the homogeneity of the log odds ratios among the various groups (Fleiss, 1973).
To test for differences between the mean numbers of consultations in Curaçao and the Netherlands, 95% Confidence Intervals for the differences between two means with unequal sample size (and known sigmas) were calculated.

2.3 Results

General utilization figures

The first column of Table 2.1 shows the proportions of individuals in Curaçao who had at least one consultation with the various health services in the 12 months preceding the interview.
Eight out of every 10 people consulted a GP and half as many (40.5%) consulted a specialist; 42% visited a dentist in one year, and 7.6% were admitted to a local hospital. The role of alternative healers in health care is worth mentioning; annually they see almost 6% of the adult population. Mental health services are used by few people: 1.7%.

Table 2.1
Use of health services in Curaçao, in 1 year

Health services	% Persons with contact	Mean number of consultations per 100 persons	Mean number of consultations per person consulting
General practitioner	80.1	420.4	5.3
Specialist	40.5	202.7	5.0
Specialist abroad	3.6	4.9	1.4
Hospital	7.6	8.3	1.2
Hospital abroad	0.7	0.8	1.1
Dentist*	42.0	85.8	2.1
Physiotherapist	8.8	137.4	15.8
District nursing	3.1	145.8	48.2
Dietician	3.3	19.2	5.9
Social work	0.8	2.1	2.8
Mental health care	1.7	12.2	7.4
Alternative healers	5.8	21.2	3.7

* Excluding persons with no own teeth

Also depicted in Table 2.1 is the use of health services abroad: every year 3.5% of the adult population receive outpatient specialist treatment abroad. In addition 0.7% are hospitalized abroad, that is, for every 10 hospital admissions in Curaçao there is 1 admission abroad.
The proportions in the first column of Table 2.1 give an impression of the incidence or *probability* of use of the various services, but they do not indicate how often these services are actually used. Therefore, the second and third column of the Table show the *volume* of health care use, i.e., the mean numbers of consultations with the various services in one year. A distinction is made between the mean number of consultations per 100 of the population, and the mean number of consultations per person who is actually consulting. Given the fact that only a limited proportion of persons have actual contact with a certain health service, the mean number of consultations per person consulting exceeds the crude mean. Every year about 420 GP consultations per 100 of the population take place. About half as many specialist consultations take place. Patients consulting a GP do so on average 5.3 times per year; the specialist is consulted almost as frequently, i.e., 5 times per year.

Table 2.2
Health services utilization in Curaçao (n=2248) and the Netherlands[1] (n=7186) in 1 year; proportions of persons with contact

		GP		Specialist[2]		Hospital[2]		Dentist[3]		Physiotherapist	
		%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Total	CUR	80.1	[78.4-81.7]	42.0	[40.0-44.1]	8.1	[7.0- 9.3]	42.0	[39.8-44.2]	8.8	[7.6-10.0]
	NL	78.5	[77.5-79.4]	41.0	[39.9-42.1]	7.2	[6.6- 7.8]	88.5	[87.7-89.2]	16.3	[15.4-17.2]
Sex											
Men	CUR	72.7	[69.7-75.5]	37.3	[34.3-40.5]	6.9	[5.3- 8.6]	40.3	[37.0-43.6]	8.7	[7.0-10.7]
	NL	71.2	[69.7-72.7]	37.3	[35.7-38.9]	6.8	[6.0- 7.7]	85.6	[84.4-86.7]	13.1	[12.0-14.3]
Women	CUR	85.6	[83.6-87.5]	45.8	[43.1-48.6]	9.0	[7.5-10.7]	43.4	[40.4-46.3]	8.8	[7.3-10.5]
	NL	85.5	[84.3-86.6]	44.6	[43.0-46.2]	7.6	[6.8- 8.5]	91.4	[90.5-92.3]	19.4	[18.1-20.7]
Age											
18-24	CUR	76.4	[71.4-81.0]	27.4	[22.5-32.6]	4.4	[2.4- 7.3]	38.4	[33.0-44.0]	4.4	[2.4- 7.3]
	NL	72.1	[69.0-74.9]	31.2	[28.2-34.3]	2.9	[1.9- 4.2]	91.4	[89.4-93.2]	8.7	[6.9-10.7]
25-44	CUR	82.2	[79.6-84.6]	37.6	[34.5-40.8]	6.7	[5.2- 8.4]	44.9	[41.6-48.2]	9.9	[8.1-12.0]
	NL	76.6	[75.0-78.1]	35.5	[33.8-37.3]	5.2	[4.4- 6.1]	90.9	[89.8-91.9]	14.6	[13.4-15.9]
45-64	CUR	78.7	[75.4-82.0]	46.8	[43.0-50.6]	8.4	[6.4-10.7]	44.9	[40.9-49.0]	9.5	[7.5-12.0]
	NL	79.1	[77.3-80.8]	43.0	[40.9-45.2]	8.1	[7.0- 9.4]	85.0	[83.4-86.5]	21.1	[19.4-22.9]
65+	CUR	80.4	[75.4-84.8]	61.9	[56.0-67.5]	16.2	[12.1-20.9]	23.1	[17.0-30.2]	7.9	[5.1-11.6]
	NL	87.0	[85.0-88.8]	58.8	[56.0-61.6]	13.9	[12.0-16.0]	77.3	[74.8-79.6]	18.1	[15.9-20.3]

1 Source: Central Bureau of Statistics, 1994
2 CHS data on consultations in Curaçao and abroad were taken together
3 Persons with no own teeth were excluded

Although the physiotherapy and district nursing services are not used by many people, there are quite a lot of contacts involved. This is inherent to the nature of the services in question; physiotherapy usually comprises a series of treatments and district nursing services are mainly used by patients with chronic conditions and older people who need long-term care. Patients using district nursing have an average of 48.2 contacts with this service per year. The number of visits to the physiotherapist averages 15.8 during one year.

The dentist is visited about twice a year. Patients who have been hospitalized in the last year, underwent an average of 1.2 admissions. The mean frequency of contacts with other services varies from 1.1 for hospital admissions abroad to 7.4 for contacts with mental health services.

In Table 2.2, the proportions of health care users in Curaçao are compared to those in the Netherlands. The proportions of individuals who annually consult a GP or specialist, and who are hospitalized are fairly similar in both populations. However, the use of dentists in the

Table 2.3
Health services utilization in Curaçao and the Netherlands[1] in 1 year; mean numbers of consultations per person consulting

		GP		Specialist[2]		Hospital[2]		Dentist[3]		Physiotherapist	
		m	95% CI	m	95% CI	m	95% CI	m	95% CI	m	95% CI
Total	CUR	5.3	[4.7-5.9]	4.9	[4.1-5.7]	1.2	[1.1-1.3]	2.1	[1.9-2.3]	15.8	[12.3-19.3]
	NL	5.0	[4.6-5.4]	4.8	[4.4-5.2]	1.3	[1.2-1.4]	3.1	[2.9-3.3]	19.4	[18.2-20.6]
Sex											
Men	CUR	4.1	[3.3-4.9]	5.2	[3.8-6.6]	1.2	[1.1-1.3]	2.1	[1.7-2.5]	16.3	[9.7-22.9]
	NL	4.5	[4.1-4.9]	4.6	[3.8-5.4]	1.3	[1.2-1.4]	2.9	[2.5-3.3]	17.0	[15.4-18.6]
Women	CUR	6.0	[5.2-6.8]	4.8	[3.8-5.8]	1.2	[1.1-1.3]	2.2	[2.0-2.4]	15.4	[11.9-18.9]
	NL	5.5	[5.1-5.9]	5.0	[4.4-5.6]	1.3	[1.2-1.4]	3.3	[2.9-3.7]	20.9	[19.3-22.5]
Age											
18-24	CUR	6.0	[4.2-7.8]	4.9	[2.4-7.4]	1.1	[0.9-1.2]	2.2	[1.4-3.0]	6.5	[3.4- 9.6]
	NL	4.2	[3.4-5.0]	4.6	[3.0-6.2]	1.3	[1.1-1.6]	2.4	[1.8-3.0]	14.1	[10.6-17.6]
25-44	CUR	5.3	[4.5-6.1]	4.6	[3.4-5.8]	1.2	[1.1-1.3]	2.2	[1.8-2.6]	17.5	[11.8-23.2]
	NL	4.6	[4.2-5.0]	4.9	[4.1-5.7]	1.2	[1.1-1.3]	3.0	[2.6-3.4]	16.3	[14.7-17.9]
45-64	CUR	4.9	[3.9-5.9]	4.7	[3.5-5.9]	1.2	[1.1-1.3]	2.0	[1.4-2.6]	16.0	[10.0-22.0]
	NL	5.0	[4.4-5.6]	4.0	[3.2-4.8]	1.2	[1.1-1.3]	3.6	[3.0-4.2]	20.5	[18.6-22.5]
65+	CUR	5.0	[3.6-6.4]	6.1	[4.2-8.1]	1.1	[1.0-1.2]	2.1	[1.5-2.7]	13.7	[8.6-18.8]
	NL	6.5	[5.7-7.3]	5.9	[4.9-6.9]	1.3	[1.2-1.4]	3.6	[2.6-4.6]	25.2	[22.1-28.3]
N	CUR	1797		945		182		561		196	
	NL	5641		2946		517		5010		1171	

1 Source: Central Bureau of Statistics, 1994
2 CHS data on consultations in Curaçao and abroad were taken together
3 Persons with no own teeth were excluded

Netherlands differs dramatically from that in Curaçao: each year almost twice as many Dutch people see a dentist (CI for the difference: 44% - 49%). A similar pattern is found with respect to the use of physiotherapists: annually 16.3% of the Dutch adults are treated by a physiotherapist versus 8.8% of the Curaçao adults (CI for the difference: 6% - 9%).
Table 2.3 shows that Dutch people who consult dentists also visit their dentist more frequently: they do so with an average of 3.1 times a year, whereas the Curaçao people on average see their dentist 2.1 times a year (CI for the difference: 0.70 - 1.30). Dutch people also tend to make more extensive use of physiotherapists: the mean number of visits to a physiotherapist in the Netherlands is 19.4, in Curaçao the physiotherapist is visited with an average of 15.8 times in one year. However, this difference falls short of statistical significance (CI for the difference: -0.04 - 7.24). The volume of GP, specialist, and hospital utilization does not differ across the two populations.

Utilization by sex

The proportions of individuals consulting the various health services by sex are rendered in Table 2.2. In Curaçao, as well as in the Netherlands, significantly more women than men make use of the services of GPs and specialists. The two populations differ with respect to the sex-related distribution of dentist and physiotherapist utilization: in Curaçao about equal proportions of men and women consult these services, whereas in the Netherlands the odds are significantly greater for women.
Men and women in Curaçao do not differ with respect to the mean numbers of consultations with the various health services, except for the GP: women significantly more often consult their GP than men (see Table 2.3). The same goes for Dutch women. In addition, Dutch women also appear to make more extensive use of physiotherapists than their male counterparts: Dutch women who make use of a physiotherapist do so with an annual average frequency of 20.9 times (CI: 19.3-22.5), whereas Dutch men do so 17.0 times (CI: 15.4-18.6).

Utilization by age

Table 2.2 shows that in Curaçao the proportions of people who consult a specialist and who are hospitalized are considerably greater in the older age groups. Similar patterns are observed in the Netherlands. Dentists in Curaçao are *less* often frequented by older individuals (persons with no own teeth are excluded from the analysis). In the Netherlands, elderly people are also less likely to visit a dentist, but the odds ratios are not

homogeneous across the two samples: while in Curaçao the odds of visiting a dentist are greatest in the middle age groups (25-64), in the Netherlands they are greatest in the youngest age groups (18-44).
A remarkable outcome is that in Curaçao the probability of consulting a GP is not related to age: in all age groups about equal proportions annually see a GP. This pattern contradicts with findings from the Netherlands. The Dutch data show an increase of GP consultations with increasing age; in the youngest age groups the numbers of people consulting a GP are slightly lower than in Curaçao, while among the Dutch elderly the odds of consulting a GP are significantly greater.
The volume of health services utilization is not significantly related to age in Curaçao: of those people who make use of the various health services, all age groups consult the care providers with more or less the same average frequency. In the Netherlands, only the volume of GP utilization is related to age: Dutch people aged 65 years and older consult their GP with a higher average frequency (6.5 times [CI: 5.7-7.3]) than the younger age groups.

2.4 Discussion

The figures on utilization of GPs, specialists, and hospitals in Curaçao are strikingly similar to the data on health care utilization in the Netherlands. This similarity is remarkable, all the more because until now the prevailing belief among health care professionals was that health care utilization in Curaçao is very high, supposedly because of a well-nurtured culture of medical shopping. The results of this study indicate that, when using the Netherlands as reference, the use of GPs, specialists and hospitals is not disproportionally high.
Dentist consultations are remarkably less common in Curaçao than in the Netherlands. From a preventive perspective, the use of dentists in Curaçao is definitely too low. Physiotherapists are also more widely used in the Netherlands. The current use of physiotherapists in Curaçao is comparable to that in the Netherlands in the first half of the 1980's (Swinkels, 1990). Physiotherapy is a relatively new profession. Over the last decades the use of physiotherapists has shown a marked increase in the Netherlands. It is very well possible that at present a similar trend is taking place in Curaçao, which would mean that we could expect a doubling in the use of physiotherapists over the next ten years. Follow-up research is needed to monitor whether such a development is actually taking place and, if so, what are the implications thereof.
Alternative healers are consulted by 5.8% of the Curaçao adults. In 1992 6.7% of the Dutch population aged 20 years and older made use of the services of alternative healers (Verweij, 1992; Frenken, 1993). These percentages are fairly similar, although in Curaçao probably a larger

share of alternative health care is taken up by traditional healers originating from the diverse cultures the island hosts.
To put the Curaçao figures in a broader international context, we also compared the use of physicians and hospitals with that in the USA (see Table 2.4). The US data are derived from the National Health Interview Survey in 1991 (Adams and Benson, 1992) and refer to the adult (18+) non-institutionalized population as well. The numbers of physician contacts per person per year are more or less the same: 6.3 in Curaçao versus 6.2 in the USA. The US reference data make no distinction between GPs and specialists. However, other studies show that the contribution of GPs is far more modest in the US health care system where practically all medical specialists are directly accessible. Approximately 16.4% of all physician visits concern general and family practices. All other visits are to specialists, with internal medicine taking up the greatest share, i.e. 52.5% (Norton and McManus, 1989). So, although the easier accessibility of specialists in the USA is reflected in a proportionally greater use of specialists, the total use of physicians is about equal to that in Curaçao and the Netherlands. The use of hospitals is somewhat higher in the USA: 11.3 hospital discharges per 100 persons per year versus 9.4 hospital admissions per 100 adult inhabitants of Curaçao.

Table 2.4
Health services utilization in Curaçao and the USA[1] by the adult (18+) non-institutionalized population

	Physician contacts per person per year		Hospitalizations[2] per 100 persons per year	
	Curaçao[3]	USA	Curaçao[4]	USA
Total	6.3	6.2	9.4	11.3
Sex				
Men	4.9	4.9	8.0	10.6
Women	7.3	7.3	10.4	11.9
Age				
18-24	5.9	3.9	4.8	5.9
25-44	6.1	5.1	7.9	6.7
45-64	6.1	6.6	10.0	11.7
65+	7.8	10.4	17.9	27.2

1 Source: National Health Interview Survey, 1991
2 The CHS data refers to hospital admissions; the US data refers to hospital discharges. In both datasets deliveries were excluded.
3 CHS data on GP and specialist consultations in Curaçao and abroad were taken together
4 CHS data on hospital admissions in Curaçao and abroad were taken together

Considering that in general women and elderly persons have comparatively more health problems (Ross and Bird, 1994; Alberts et al., 1995) one would expect a proportionally greater need for health care among these groups. Indeed, the Curaçao Health Study demonstrates some marked differences between demographic groups in utilization of the various health services.

Women are more likely to consult GPs and specialists than men, and on average they have more consultations with their GP. Similar patterns are observed in the Netherlands, and Table 2.4 shows that the sex distribution of physician contacts is also very similar to that in the USA. With increasing age, more people consult specialists and are hospitalized, while less people consult a dentist. This is the case both in Curaçao and the Netherlands. The use of dentists also appears to be relatively low among the youngest age group of 18-24 years in Curaçao. Evidently there is a case to be made for policy focusing on increasing awareness of the importance of dental care among young adults.

In contrast to what is found in the Netherlands, older people in Curaçao are not making more use of the services of GPs than younger individuals. The question is: do these outcomes reflect a high level of GP utilization on the part of young people, or is it a matter of relatively limited use by older people? A comparison with the Dutch data suggests that explanations might be found in either direction: younger people in Curaçao appear to make more use of GPs than their Dutch contemporaries, whereas the prevalence of GP consultations by older people is somewhat lower than in the Netherlands. The same appears to apply when we compare the age-related physician utilization in Curaçao to that in the USA: although Table 2.4 includes both GP and specialist consultations, it also shows a comparatively higher use among the youngest age group and a comparatively lower use among the oldest age group in Curaçao. The level of GP utilization by young adults might perhaps be explained by a relatively high prevalence of psychosomatic morbidity among this age group in Curaçao: studies have shown that psychosocial problems and several psychosomatic disorders, such as back problems, migraine, and stomach ulcers are more prevalent among young adults in Curaçao than among their Dutch counterparts (Alberts et al., 1995; Gerstenbluth et al., 1995). How to explain the rather low use of GPs by older people is less clear. Are there specific needs among the elderly not being met by primary health care? Or are there other, hitherto unknown factors which inhibit the elderly from attending their GP? Further analyses are required to unravel these issues. This becomes all the more important if Curaçao is to swift from costly specialized care to more primary health care.

Finally, some methodological remarks concerning the present study are due. A health interview survey is a valuable instrument to collect comprehensive information about the use of a wide range of health

services, but the fact that the data are based on self-report may cause some bias. Possibly some underreporting by the participants is involved, especially with regard to the use of alternative/traditional healers and mental health care. Although traditional practices involving magic and natural healing are a well-known phenomenon in Curaçao, there is some taboo attached to it. Likewise, people may find it difficult to tell an interviewer that they use mental health care. Moreover, collecting information from (ambulatory) psychiatric patients through a survey is very difficult, if not impossible. In the Curaçao Health Study 0.6% of the total sample yielded non-response because the person was not able to participate due to his/her mental state (Alberts et al., 1996).

Recall effects constitute another possible source of bias in retrospective surveys (Swinkels, 1995). First of all, people can forget some of the contacts; the longer the reference period, the more contacts are forgotten. This memory effect is not equal for all health services under study: GP consultations are more easily forgotten than hospital admissions. Hence, we restricted the reference period for estimating the numbers of GP and specialist consultations to two weeks. A second source of recall bias is that people do remember the contact but not exactly when it took place. Contacts can be displaced in time both backwards and forward (telescoping effect).

An important advantage of this study is that the data from Curaçao and the Netherlands were collected, using exactly the same instruments and the same reference periods. Although recall effects may have caused an underestimation of the absolute levels of health care utilization, we may assume that these effects were equal in both studies. This makes it possible to draw quite reliable conclusions about relative differences in health care utilization between the two populations.

3 Socioeconomic inequity in health care: a study of services utilization in Curaçao[1]

The aim of this chapter is to examine whether there is socioeconomic equity in health care utilization in Curaçao, Netherlands Antilles. We explore how educational level is related to utilization of GPs, specialists, hospitals, dentists, and physiotherapists, taking into account the effects of sex, age, and inequalities in health. The study also examines whether these relationships vary according to the unit of analysis: probability (or incidence) of services use versus overall volume of contacts.
The results indicate that there is socioeconomic inequity in the probability of health care utilization in Curaçao. People with a higher educational level are more likely to consult a specialist, dentist or physiotherapist, and are also more likely to be hospitalized. This is not only the case when the mediating effects of socioeconomic inequalities in health (need) are taken into account, but also before adjustment for health inequalities. In other words: there appears to be both vertical inequity (i.e., greater needs for services are not met by greater use) and horizontal inequity (i.e., similar needs for care are not met by similar levels of service use). The observed inequalities in use of specialists and hospitals contrast with findings from international research. The volume of health services use (i.e., the numbers of consultations) appears to be hardly connected with a person's position in the SES hierarchy; only dental services are used more extensively by higher educated individuals.

3.1 Introduction

Equity in health and equal access to health care are major targets in most health policies. Understanding of the causes of inequalities in health and care utilization is a prerequisite for designing adequate policies (Lairson, Hindson and Hauquitz, 1995).
The target of equal access is based on the principle that health care should be provided according to need, and not according to factors such as ability to pay for care (Whitehead, 1992). Health policy in Curaçao has pursued equity of access to health care through the removal of financial barriers to access; the island has a mixed public and private health care system designed to cover the entire population. Public financed care, provided by government-employed physicians and health care workers, is guaranteed for inhabitants with a substandard level of income. However,

[1] JF Alberts, R Sanderman, JM Eimers, WJA van den Heuvel. Published in: Social Science & Medicine 1997; 45: 213-220. Reproduced by permission of Elsevier Science Ltd.

it is not likely that removal of financial barriers alone guarantees equal accessibility to health care; other non-price related factors may differ among population groups, which create barriers to equal access (Wouters, 1992; Newbold, Eyles and Birch, 1995).
Inequalities in health and access to care are strongly interwoven with socioeconomic inequalities. Socioeconomic status (SES) can be seen as a multidimensional indicator of certain interrelated demographic, economic and sociocultural attributes, which determine the individual's power, esteem or prestige in the stratified structure of society (Van Berkel-van Schaik and Tax, 1990). These attributes point to the resources that are available to individuals, their physical as well as social environment and associated behavior patterns.
The relationships between SES and health status have been well documented in the international research literature for many years. A lower SES is consistently found to be related to higher rates of morbidity and shorter life expectancy (Hay, 1988; House, Kessler and Herzorg, 1990; Marmot et al., 1991; Van der Lucht, 1992; Lahelma et al., 1994). Also in Curaçao lower SES is associated with a poorer physical health status, higher morbidity rates, more psychological problems, and a poorer perceived health (Koopmans et al., 1995; Alberts et al., 1996).
Findings on the relationships between SES and health care utilization are more scarce and less clear. In the 1970s Andersen and Aday (1978) found that educational level had two relatively small effects on health care utilization, which at first sight appeared to be contradictory. Firstly, a direct effect was found, showing that higher educated individuals are making more use of health services. Secondly, an indirect effect was found, with higher education leading to less illness and fewer physician visits. More recent research reveals that lower SES appears to be related to more use of health services for diagnosis and treatment, while higher SES appears to be related to more use of preventive services, such as dental services and screening programs (Wan and Odell, 1981; Illsley and Svensson, 1986; Adler et al., 1993).
The goal of equal access to health care is equal opportunity, not equality in utilization or end-of-state health. Access may be considered in the context of whether those persons actually in need of health care receive it (Aday and Andersen, 1974; Mooney, 1983). Viewed in this light one may speak of equal access if socioeconomic differences in use of curative health care are largely explained by inequalities in need (i.e., inequalities in health). A distinction can be made between vertical and horizontal equity. Vertical equity means that greater needs for services are met by greater use; horizontal equity means that persons in equal need receive the same level of health care.
Several studies in the Netherlands have demonstrated that lower SES is related to more use of general practitioners, specialists, and hospitals (Ooijendijk and Schaapveld, 1992; Van den Bos and Lenior, 1992; Van

der Meer, Looman and Mackenbach, 1994). This finding points to vertical equity: the poorer health status of the lower SES groups is reflected in a higher level of services utilization. When inequalities in health status are taken into account the differences in GP and hospital utilization in the Netherlands largely disappear. This finding suggests horizontal equity of access to these services. However, the Dutch studies also demonstrated that the relationship between SES and specialist utilization becomes an inverse one after adjustment for health inequalities. Persons with a higher socioeconomic status report more visits to specialists, i.e., there appears to be some degree of horizontal inequity of access to specialist services. The use of physiotherapists also appears to be positively associated with SES, both before and after adjustment for health inequalities.

So, the relationship between SES and health care utilization is not unequivocal; it varies according to the type of health service under study. These differences are described in various studies, but less attempts have been made to explain the observed differences.

A characteristic of health care utilization which is not often taken into account in studies on the SES-utilization relationship is the *unit of analysis*. According to Andersen and Newman (1973) it makes a considerable difference whether we study initial contact with a care provider during a given period (incidence or *probability of use*) or whether we look at the number of services received in a given period of time (*volume of use*). Characteristics of the individual might be of primary importance in explaining whether or not any health services are used, but in determining the overall volume of services use other factors might be decisive, such as characteristics of the physician.

In two recent studies on socioeconomic equity in hospital care in Canada and Finland both probability and volume of hospital use were analyzed (Newbold, Eyles and Birch, 1995; Keskimäki, Salinto and Aro, 1995). The results of the Canadian study support the supposition of Andersen and Newman: household income had a significant positive effect on the probability of hospital utilization after adjustment for health inequalities. However, variation in volume of hospital use was largely independent of income. In the Finnish study, on the other hand, both probability and volume of hospital use were equally affected by SES: lower SES was associated with a higher risk of hospitalization and more inpatient days, but when inequalities in health were taken into account these associations largely disappeared.

In this study we explore how SES and utilization of various health services in Curaçao are interrelated, and whether these relationships vary according to the unit of analysis: probability of services use versus overall volume of contacts.

Since SES is related to health outcomes and also to sex and age, the relationships between SES, health parameters, age, sex, and utilization will be evaluated at first. Next, unadjusted associations between SES and health care utilization are analyzed, and the effects of SES are analyzed after adjustment for age and sex differences. Finally, the SES-utilization relationship is analyzed taking into account inequalities in health status.

3.2 Methods and material

Subjects

Participants in the present study are inhabitants of Curaçao, a Caribbean island with a population of 144.000, located some 30 miles off the Venezuelan coast. Curaçao is one of the islands of the Netherlands Antilles which form part of the Kingdom of the Netherlands. The data were derived from the Curaçao Health Study, a large-scale health interview survey among the adult non-institutionalized population, which was carried out between November 1993 and August 1994 (Alberts et al., 1996). The study sample was randomly drawn from the Registry Office, and the subjects were surveyed in face-to-face interviews by trained interviewers.
Of the 3000 individuals in the sample 364 (12.1%) did not meet the inclusion criteria or yielded non-response because of sample errors. This category comprised individuals who had not yet reached the age of 18 years, those who had been institutionalized permanently or long-term after the sample had been drawn, the deceased, individuals who had moved house, and those whose address could not be located. Of the 2636 individuals who did fit the sample frame 2248 persons (85.3%) were willing to participate in the study. The sample consists of 57.2% women; the mean age of the study participants is 43.7 (range: 18-99 years).

Instruments

Utilization variables

The use of the following health services was assessed: general practitioners, specialists, hospitals, dentists, and physiotherapists. Only contacts with a health service in connection with the participant's own health were assessed.
Contacts with a GP included consultations during consultation hours and by phone, as well as house calls. Use of specialists was limited to policlinical treatment; specialist care during hospitalization was excluded. Hospital utilization was assessed, excluding admissions for deliveries.

For each service two variables were analyzed:

- whether or not the service in question was used (*probability of use*); for GP and specialist consultations the reference period was 2 months, for the other services the reference period was one year.
- the number of consultations with that service, reported by the participants indicating some use (*volume of use*). The volume of hospital utilization was quantified by the number of hospital days in one year.

Socioeconomic status

Usually three components are distinguished which constitute an individual's SES: a material component, a knowledge-component and a sociocultural component (Tax, Furer and König-Zahn, 1990). These components are strongly interrelated, and can be operationalized in terms of income (material), educational level (knowledge), and occupation (sociocultural).

In this study, we only used educational level as SES indicator. Income and occupation were not included in the analyses. This was done, first of all because the current research literature suggests that educational level is the strongest predictor of socioeconomic health inequalities (Ranchor, Sanderman and Van den Heuvel, 1990; Van der Lucht, 1992). Also, this variable can be used as individual SES indicator for participants of all ages and both sexes without important measurement problems.

The participants' educational level was coded according to the International Standard Classification of Educations (ISCED), developed by the UNESCO in 1976. Three groups were formed based on the participants' highest level of education, including both regular education and other vocational training or courses:

1. low: no education, primary school (25.7%)
2. middle: lower secondary education (40.8%)
3. high: higher secondary education, higher vocational education, academic education (33.5%).

Health status

The following health measures were used:

Number of chronic disorders - The questionnaire used is a revised version of the list of chronic disorders developed by the Netherlands' Central Bureau of Statistics (Mootz and Van den Berg, 1989). The participants were presented with a list of 33 chronic conditions (plus up to 3 other diseases not mentioned in the list). For each disease the subject was asked whether he/she has suffered from it in the past 12 months. The mean number of chronic disorders reported by the total sample was 1.2 (SD: 1.5, Range: 0-9).

Number of short-term complaints - This list is a revised version of the list developed for the Whitehall II Study in Great Britain (Marmot et al., 1991). Subjects were asked about the presence of 22 symptoms covering most body systems (plus up to 3 other symptoms not mentioned in the list), in the past 14 days. The subjects reported an average of 1.9 short-term complaints (SD: 2.2, Range: 0-14).
Physical functioning - This dimension of the RAND 36-item health survey measures limitations in performing daily activities resulting from health problems (Hays and Sherbourne, 1992; Van der Zee et al., 1996). The scores on the 10 items were coded, summed and transformed onto a scale ranging from 0 (worst health) to 100 (best health). The mean score of the total sample was 89.3 (SD 20.4, Range 0-100).
General health perception - This 5-item instrument is also a dimension of the RAND-36, and has the same coding algorithm. It measures the subjective evaluation of a person's general health status. The mean sumscore of the sample was 68.0 (SD: 18.5, Range: 5-100).

Analyses

The *probability* of services utilization (i.e., whether or not the services in question were used) was analyzed using logistic regression, since the dependent variable is dichotomous. The overall *volume* of services utilization (i.e., numbers of consultations/bed days) reported by the subsamples indicating at least one contact in the reference period, was analyzed using ordinary-least squares regression. The distribution of the measures on volume of services utilization is highly positively skewed; this is not acceptable when using linear analysis. Following Wolinsky and Coe (1984), these measures were adjusted for non-normality by logarithmic transformations to base 10. Table 3.1 shows the skewness coefficients of the variables before and after transformation (deviations from zero indicate some skewness). The transformed variables have a more acceptable distribution, although the distribution of specialist consultations is still somewhat skewed (Kempen and Suurmeijer, 1991).
Steps in the analyses were:

1. analyzing the crude effects of education on health care utilization
2. analyzing the effects of education, after adjustment for age and sex differences
3. analyzing the effects of education, after adjustment for age and sex differences, and health status.

Adding of the independent variables to the regression equation was controlled by separately forcing each block of variables into the equation. In this way, the SES effects were adjusted for the effects of all variables entered, including possible non-significant ones.

3.3 Results

Preliminary analyses

In Table 3.1 an overview is given of the scores on the dependent variables. The most widely consulted health care professional in Curaçao is the general practitioner; in the two months prior to the interview 38% of the participants consulted their GP. Specialists were consulted by about half as many people. About 8% were admitted to a hospital in the year prior to the interview. Less than half of all participants reported to have visited a dentist in the preceding year, and about 9% used the services of a physiotherapist.
Those who consulted a GP in the preceding 2 months (n=852) did so with an average of 1.6 times, which is about equal to the volume of specialist consultations (mean: 1.7, n=392). The average frequency of contacts with the other services varies from 2.1 to 15.8 times in one year. Table 3.2 shows the unadjusted product-moment coefficients of the independent variables. Educational level is significantly positively associated with practically all health measures. Both women and older people have a significantly poorer health status (all health measures), and a lower educational level.

Table 3.1
Probability[1] and volume[2] of health services utilization

	Probability	Volume					
		mean	SD	min-max	skewness	skewness (transformed)	N
GP	38.0	1.6	1.1	1-15	4.4	1.7	852
Specialist	17.5	1.7	2.0	1-24	7.8	2.7	392
Hospital	7.6	11.0	15.5	1-120	4.0	0.4	162
Dentist	42.0	2.1	2.4	1-40	7.7	1.8	901
Physiother.	8.8	15.8	24.7	1-192	4.5	0.3	196

1 Percentages of persons with contact in 2 months (GP, specialist) or 1 year (hospital, dentist, physiotherapist).
2 Mean numbers of consultations in 2 months (GP, specialist) or 1 year (hospital, dentist, physiotherapist). For hospitals the number of bed days is calculated.

Table 3.2

Matrix of Pearson's product-moment coefficients of health, age, sex, education, and probability of health services utilization

	1	2	3	4	5	6	7	8	9	10	11
1. General health perception (– better)											
2. Physical functioning (– better)	.39**										
3. No. of chronic conditions (– more)	-.46**	-.40**									
4. No. of short-term complaints (– more)	-.41**	-.25**	.46**								
5. Age (– higher)	-.14**	-.43**	.22**	-.06*							
6. Sex (1–male, 2–female)	-.14**	-.14**	.17**	.15**	.02						
7. Educational level (– higher)	.15**	.25**	-.16**	-.01	-.41**	-.15**					
Consultations with:											
8. GP (0–no, 1–yes)	-.08**	-.06*	.16**	.16**	.01	.16**	-.01				
9. Specialist (0–no, 1–yes)	-.14**	-.23**	.26**	.08**	.18**	.08**	.00	.12**			
10. Hospital (0–no, 1–yes)	-.12**	-.20**	.17**	.06*	.09**	.03	.00	.02	.27**		
11. Dentist (0–no, 1–yes)	.04	.11**	-.02	.02	-.12**	.01	.27**	.06*	.04	.01	
12. Physiotherapist (0–no, 1–yes)	-.07**	-.13**	.13**	.09**	.03	.00	.08**	.04	.13**	.10**	.06*

N=2219

* $p < .05$

** $p < .005$

As for the *probability of health services utilization*, Table 3.2 shows that educational level is significantly positively associated with the use of dentists and physiotherapists. Age is not related to the probability of consulting GPs and physiotherapists. Older people do have a greater chance of visiting a specialist or hospital. More younger people see a dentist. Women are more likely to consult a GP or specialist than men. The health variables are significantly negatively related with the probability of using all health services, except for dentists. On the contrary, the use of the latter service is positively associated with physical functioning.
The correlations between the independent variables and *volume of health services utilization* are depicted in Table 3.3. At the bivariate level education only has a significant effect on the volume of dentist utilization. Older people tend to be hospitalized for longer periods, but they less often see a GP than younger individuals. Men are hospitalized for longer periods, whereas women appear to make somewhat more use of GPs. The volume of GP and specialist utilization is significantly

Table 3.3
Pearson's product-moment coefficients of health, age, sex, and education with transformed utilization variables (volume of use)

	GP	Specialist	Hospital	Dentist	Physiother
General health perception (– better)	-.19**	-.23**	-0.04	-0.02	0.04
Physical functioning (– better)	-.15**	-.26**	-.25**	-0.05	-.15*
No. of chronic conditions (– more)	.14**	.12*	0.13	.06*	0.07
No. of short-term complaints (– more)	.16**	.16**	0.07	0.05	0.01
Age (– higher)	-.08*	-0.06	0.12	0.02	0.09
Sex (1 = male, 2 = female)	.06*	-0.05	-.17*	0.03	0.07
Educational level (– higher)	0.02	0.04	-0.05	.08*	-0.06
N	844	388	159	898	196

* $p < .05$
** $p < .005$

negatively correlated with all health variables. The numbers of hospital days and physiotherapy sessions are only negatively associated with physical functioning: these services are used more extensively by persons who have more limitations in performing daily activities. The volume of dentist utilization is weakly associated with chronic morbidity.

Main analyses

Table 3.4 shows the odds ratios of educational level for *probability of health services utilization*. The crude ORs differ significantly for utilization of dentists and physiotherapists. People of the highest educational level are almost 5 times more likely to visit a dentist in one year than people of the lowest educational level, and are about twice as likely to see a physiotherapist. After adjustment for sex and age differences, the use of specialists and hospitals turns out to be positively associated with educational level as well: higher educated people are also

Table 3.4
Odds ratios of educational level for probability of health services utilization (95% confidence intervals in parentheses)

	Educational level	Crude ORs	ORs adjusted for age and sex	ORs adjusted for age, sex, and health
GP	low	1.00	1.00	1.00
	middle	1.11 (0.89-1.38)	1.26 (0.97-1.63)	1.31 (1.00-1.71)
	high	0.99 (0.78-1.24)	1.20 (0.92-1.57)	1.25 (0.95-1.64)
Specialist	low	1.00	1.00**	1.00**
	middle	0.79 (0.59-1.04)	1.83 (1.30-2.57)	2.03 (1.41-2.90)
	high	0.98 (0.74-1.30)	2.34 (1.66-3.31)	2.86 (1.98-4.12)
Hospital	low	1.00	1.00*	1.00*
	middle	1.04 (0.65-1.65)	1.86 (1.09-3.19)	2.23 (1.24-3.98)
	high	0.98 (0.61-1.59)	1.78 (1.02-3.10)	2.36 (1.46-4.29)
Dentist	low	1.00**	1.00**	1.00**
	middle	2.28 (1.71-3.03)	2.37 (1.72-3.28)	2.35 (1.70-3.25)
	high	4.73 (3.55-6.31)	5.09 (3.68-7.04)	4.98 (3.60-6.90)
Physiotherapist	low	1.00**	1.00**	1.00**
	middle	1.20 (0.74-1.95)	1.47 (0.85-2.53)	1.66 (0.94-2.94)
	high	2.13 (1.35-3.38)	2.61 (1.55-4.41)	3.18 (1.83-5.52)

* $p < .05$
** $p < .005$

more likely to see a specialist or to be hospitalized. When taking into account inequalities in health, these differences become even somewhat more pronounced. The GP appears to be the only health service which is fairly equally used among all educational levels.
To establish whether there are any socioeconomic inequalities in the overall *volume of health care utilization* once a person has entered the health care system, ordinary-least squares regression analyses were done. Table 3.5 presents the standardized regression coefficients of educational level (ß), the total amount of explained variance by all variables in the model (R^2), and the contributions of educational level to the overall R^2 (R^2-change).
The overall explained variance by all variables in the model varies from 1.7% for dentist utilization to 15.0% for the numbers of hospital days. Only the numbers of dentist visits are significantly related to educational level, with higher educated individuals reporting more dentist consultations. This is the case both after adjustment for sex and age, and when health inequalities are taken into account.
The numbers of hospital days are weakly related to educational level: after adjustment for sex, age, and health, the ß-coefficient is .09, indicating that higher educated individuals tend to be hospitalized for longer periods. However, this difference falls short of statistical significance.

Table 3.5
Ordinary-least squares regression analysis of volume of health services utilization on education (95% confidence intervals in parentheses)

	ß	R^2	R^2-change
Adjusted for age and sex			
GP	-.00 [-.08 - .07]	1.0%	0%
Specialist	.01 [-.11 - .12]	0.7%	0%
Hospital	.06 [-.10 - .22]	6.6%	0.3%
Dentist	.11** [.04 - .17]	1.2%	1.0%
Physiotherapist	-.02 [-.18 - .14]	1.3%	0%
Adjusted for age, sex, and health			
GP	.01 [-.07 - .08]	7.5%	0%
Specialist	.05 [-.06 - .16]	12.9%	0.2%
Hospital	.09 [-.07 - .24]	15.0%	0.6%
Dentist	.11** [.04 - .18]	1.7%	1.1%
Physiotherapist	-.03 [-.19 - .14]	4.5%	0.1%

** $p < .005$

3.4 Discussion

The results of this study suggest that there are socioeconomic barriers to equity in health care utilization in Curaçao. SES is *not* related to the use of GPs, but people with a higher SES are more likely to consult a specialist, dentist or physiotherapist. In addition, a higher educational level heightens the chance of being hospitalized. This is not only the case when the mediating effects of socioeconomic inequalities in health (need) are taken into account, but also before adjustment for health inequalities. In other words: there appears to be both vertical inequity (i.e., greater needs for services are not met by greater use) and horizontal inequity (i.e., similar needs for care are not met by similar levels of service use). The finding that higher SES individuals are more likely to use physiotherapists and dentists does coincide with other findings, but the observed inequalities in use of specialists and hospitals contrast with findings from international research (Wan and Odell, 1981; Illsley and Svensson, 1986; Adler et al., 1993). Most studies indicate that as a consequence of the existing health inequalities lower SES is related to more use of curative health care. Indeed, several studies have established a positive association between SES and specialist utilization (Ooijendijk and Schaapveld, 1992; Van den Bos and Lenior, 1992; Van der Meer, Looman and Mackenbach, 1994) and between SES and hospital utilization (Newbold, Eyles and Birch, 1995), but only after adjustment for health inequalities. Considering the existing health inequalities, the absence of any relationship between SES and GP utilization in our study is also conspicuous.

One attribute of the type of health services which may explain the observed socioeconomic inequalities in access to care is the nearness of the services to the population, both in terms of entry (e.g. directly accessible primary care versus secondary care for which a referral is required) and also in terms of familiarity. The GP is directly accessible, and most people have their 'own' regular GP. To gain access to a specialist a referral is required. This may pose difficulties for lower SES individuals who are less skilled to communicate with physicians and to "work the system". Even among individuals who technically have equal access, true access may differ, for some may be more skilled in dealing with bureaucracies and social systems and may be more efficient in obtaining care when needed than others. The proof of access per se is not the availability of services or resources, but whether they are actually used by the people who need them (Adler et al., 1993; Feinstein, 1993). As for socioeconomic inequalities in the use of physiotherapy, one additional explanation may be that physiotherapy is a relatively new profession. In the Netherlands the use of physiotherapists has shown a marked increase over the last decade; the current use of physiotherapists in Curaçao is comparable to that in the Netherlands in the first half of

the 1980s (Swinkels, 1990). It is plausible that higher SES individuals have been quicker in familiarizing themselves with this profession than persons lower on the SES ladder.

The relationship between SES and use of dental services may in part be explained by the mediating effects of health-related knowledge. In general, the level of health-related knowledge is higher among higher SES groups, and this facilitates the optimal application of medical directives concerning preventive care. Higher educational attainment increases awareness and promotes decision-making skills (Bernts, 1991; Feinstein, 1993).

Other patient-related factors that may account for the observed socioeconomic inequalities in health care utilization are, for example, differences in knowledge of available services, alertness to and recognition of early symptoms, perceptions of control over one's own health, and the 'social nearness' of medical professionals in one's social network (De Swaan, 1979; Furer and Tax, 1987).

In addition to factors related to the patient, the accessibility of health care may be determined by several supply factors, such as the ratio of care providers to patients in a certain area, providers' characteristics and practice style, and differences in the organization and delivery of care for population groups with public and private health insurance (Häkkinen, 1991; DiMatteo et al., 1993; Aday et al., 1993). The latter factor might be of primary importance in explaining why inequalities in specialist utilization in Curaçao appear to be stronger than in some other countries. Most specialists are part-time employed by the government to deliver care to the publicly insured. In addition to their private practice they have limited public consultation hours at the policlinic. Study data not presented here show that publicly insured patients have a markedly longer waiting time for an appointment with a specialist than the privately insured (Alberts et al., 1996). This may be associated with an unfavorable specialist-to-population ratio (i.e., fewer specialists and/or consultation hours per capita) for the publicly insured. Also, specialists have no financial incentives to exert themselves to shorten the waiting times for their public patient population, since they receive a fixed salary regardless of the numbers of patients they see.

In the present study the volume of health services use (i.e., the numbers of consultations) appears to be hardly connected with a person's position in the SES hierarchy; only dental services are used more extensively by higher SES individuals. Also, the total explained variance in volume of services use by the patient characteristics assessed in this study is quite modest. These outcomes support the notion of Andersen and Newman (1973) that, especially in determining the overall volume of services use, supply factors might be more decisive than patient characteristics.

Some methodological remarks concerning the present study are due. First, our analysis addressed initial and overall use of health services, regardless of the reasons for use, and the way contacts were established (e.g. referral versus own initiative). Insight in the associations between SES and these more specific aspects of services use may enhance our understanding of the complicated SES-use relationship.
Second, a limitation of the cross-sectional data used in this study is that the time frames associated with the recall of services use differ from the recall periods of the assessed health measures, except for the list of chronic conditions which has a recall period of 12 months. On the other hand, an important advantage of our study design is that assessments of health status independent of service utilization were used. As opposed to many studies which assess health and use as aspects of the same concept, leading the variables to be highly correlated, the health measures in this study represent underlying need for services independent of availability of services (Ranchor, Sanderman and Van den Heuvel, 1990; Häkkinen, 1991).
Another positive aspect of this study is the high response rate (85%). As a consequence the study sample can be considered to be quite representative of the adult non-institutionalized population.

In conclusion, Curaçao's actual policy of publicly funded health care for the underprivileged appears not to suffice in attaining allocation of care in line with medical necessities. Currently, major health care reforms are imminent in Curaçao. These are aimed at improving the quality of care, meeting the needs of the population, while better containing costs at the same time. The outcomes of this study underline the importance of such reforms in order to attain more equitable access to health care.

4 Proto-professionalization as a determinant of health-related behavior

Development of an index encompassing social network structure, knowledge, and locus of control

The study described in this chapter aims at constructing and validating a measure for the degree of compatibility of the lay culture with modern medicine. The constructed index encompasses three elements: social nearness to health professionals, health-related knowledge, and sense of control. Together these elements represent one underlying theoretical concept named proto-professionalization. The concept and its instrument offer a useful empirical specification of the sociocultural context as explanatory factor in studies on differences in health services use and preventive health behavior.
The instrument appears to have good psychometric properties. It is embedded in the proposed theoretical framework of relationships with other concepts, and it can replicate sociodemographic variations in proto-professionalization found in prior studies. Furthermore, the data support our hypothesis that people who are more proto-professionalized are less inclined to use health services for common illnesses, and have stronger beliefs regarding the positive effects of health behavior.

4.1 Introduction

The determinants of health services use have been the subject of many studies, applying various theoretical frameworks. Differences in care utilization have been analyzed in relation to psychosocial factors, such as individual health beliefs. They have been studied from a sociodemographic perspective, relating use to structural factors such as sex or age, and to socioeconomic status. Aspects of the 'delivery system' or supply of health services have been identified as determinants of use, and economists have emphasized the importance of cost and other financial factors (McKinlay, 1972; Nagi and Marsh, 1980).
In this study we apply a sociocultural approach, which assumes that people's help-seeking behavior is influenced by their social environment, and the prevailing norms, values and beliefs regarding medical affairs. The demand for and supply of health care take place in an interaction between two cultures: the lay culture of the patient and the professional culture of the health care provider. Within the framework of this study, the essential characteristic of the lay culture is its compatibility with that of modern medicine. Optimal application of the professional knowledge

on prevention and treatment of illness requires that lay people recognize in which cases they have to place themselves under medical treatment. In other words: lay people and professionals need to agree which health problems can or should be presented to medical professionals.
With the epidemiological shift from infectious diseases to chronic noncommunicable diseases, the insight emerged that human behavior is an important determinant of health. The maintenance of good health in the well population, through the promotion of health behavior has become an important goal of modern medicine. However, preventive measures and behavioral recommendations are doomed to fail, if the profession does not take the lay population's own set of behaviors, beliefs, norms, and values with respect to health matters into consideration, which can inhibit them from adopting new behaviors (Backett, Davison and Mullen, 1994). As Freidson (1970) argues, the difficulty to reach patients is inherent in the nature of modern medicine because, by definition, the lay population is ignorant of at least part of the profession's esoteric knowledge and practices. They will therefore react differently to signs and symptoms than professionals.

Some of the first efforts to examine health-related behavior within the broad framework of a sociocultural setting, rather than to identify single, specific factors associated with observed behavior, were made by Freidson (1961, 1970) and Suchman (1966). Both authors analyzed variations in reactions to modern medicine in terms of two major social factors: the structure of the social group to which the individual belongs ('lay structure' or 'social network'), and the health orientation or value system to which the individual adheres ('lay culture').
In trying to explain the population's resistance to public health programs, Suchman (1966) devised a dichotomy in the social structure in which the individual is embedded (parochial versus cosmopolitan), and in the health orientation or value system to which he adheres (popular versus scientific). He hypothesized that, the more the social structure can be characterized as parochial (i.e., ethnocentric, highly integrated, and oriented to family tradition and authority), and the more the health orientation the individual holds partakes of a nonscientific popular character (i.e., low knowledge about disease, high scepticism of medical care, and high dependency in illness), the more difficulty will (s)he have in accepting and adjusting to the health care system. Suchman furthermore hypothesized that social organization will be related to health orientation with members of cosmopolitan groups more likely to share a scientific orientation. His analyses showed that highly cosmopolitan people tended to seek the services of a physician at a very early stage in illness, while those at the parochial end of the scale depended more on the prescription of relatives and friends.

Freidson (1970), in his discussion of the 'lay referral system' also makes a distinction between cosmopolitan and parochial group differentiations. He characterizes the system of the lower socioeconomic strata (SES) as parochial, both because of cultural restraints and because of their limited contacts with medical institutions. Neither the patients nor their lay advisors are very well acquainted with the variety of health services available. The influence of the lay advisors on the individual from the lower SES is strengthened by the coherence and local character of the social group; the patient will probably not be encouraged to seek alternative health services with which the group is not familiar. The cosmopolitan system is the system in which, according to Freidson, the middle class patients participate. These patients need less help or advice from others, since they are better acquainted with the medical system and have more knowledge of health and illness. They will have more confidence in their own diagnosis and their own judgement of the quality of the treatment they receive. However, if they would consult their potential lay advisors, these advisors would expand their contacts enormously by suggesting alternative sources of diagnosis and treatment. According to both Suchman and Freidson, people from parochial groups show a high dependency in illness, while individuals from cosmopolitan groups have more confidence in their own diagnosis and judgements. A theoretical concept that is closely related to these notions is the Locus of Control construct from Rotter's social learning theory. This theory proposes that people learn to relate their own behavior and the outcome of it, and consequently learn to increase their feelings of control over outcome expectancies. Sense of control concerns an individual's generalized expectancies about his or her ability to master, control, or change life conditions and events (Rotter, 1966; Goldsteen, Counte and Goldsteen, 1994). The Locus of Control reflects to what extent individuals expect to attain certain outcomes through their own behavior (internals) or expect that outcomes depend on matters beyond their control (externals), including chance, fate, luck, and powerful others (Wallston, Wallston and DeVellis, 1978). Health locus of control is usually viewed as one of the factors that predispose individuals to use medical services (Andersen and Newman, 1973; Aday and Andersen, 1974).

The concept of proto-professionalization

Both Suchman and Freidson more or less implicitly equate parochial groups who hold popular beliefs with lower SES, and cosmopolitan, scientifically oriented groups with higher SES. According to Freidson (1970) the SES variables, especially educational level, are the most useful

indicators of the compatibility of a lay culture with the professional culture in modern societies.

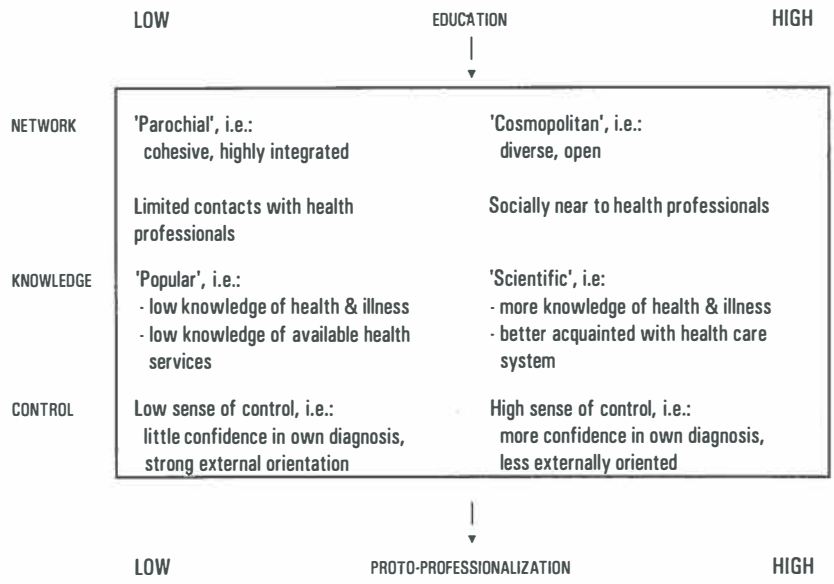
This relationship between SES, culture, and behavior is the starting-point of De Swaan's (1979) theory of 'proto-professionalization'. In his study of the use of psychotherapy, De Swaan found that among the people who presented themselves at the consultation hours there were many young adults with a higher education, who were employed in scientific professions. The author postulates that it is not the socioeconomic variables as such, which determine the knowledge, beliefs, and behavior of individuals, but that they point to the social networks or circles to which the individual has access (Kadushin, 1966). He then reasons that people who are socially close to a circle of (medical) professionals will sooner pick up the knowledge and attitudes of that profession, and will to a certain extent reflect upon their daily experiences in the same way as that profession does.

De Swaan calls this process of proliferation of professional knowledge and attitudes into the lay culture 'proto-professionalization'. Many concepts and views with which people in modern societies operate are the proto-professional counterparts of professional concepts. For example, the way in which people prepare their food or avoid contagion is partly dictated by views held within the medical profession. The main characteristics of proto-professionalized people are that they are socially near to the profession, be it through informal contacts or through work, and that they are the first to adopt concepts, insights (knowledge) and behavioral standards from the profession. De Swaan also postulates that they have a loose social network, which helps the diffusion of new insights. The 'weak links' or vague acquaintances in a network are important for the acquiring of new knowledge, because within a close-knit network the same information continues to circulate (Rogers, 1962). Finally, he mentions the propensity to discuss personal problems as a proto-professional characteristic that facilitates the gathering of advice and information.

Educational level is supposed to be an important determinant of proto-professionalization. It is assumed that the process of proto-professionalization will sooner come about among people with a lengthy education, during which they gradually learn which domains the various professions are covering. Also, within the cultural pattern of the higher educated, being able to have informed discussions about many subjects, among which are medical affairs, is desirable (Cassee, 1973).

De Swaan's theoretical framework establishes a connection between the separate concepts social network, health-related knowledge, and locus of control as determinants of health care use. We can illustrate this with a conceptual scheme (see Figure 4.1). Being socially near to medical professionals, enables an individual to acquire new knowledge of health-related matters. This strengthens the individual's sense of control; he or

Figure 4.1
Conceptual scheme



she will gradually learn which kind of health problems require professional attention, and in which cases symptoms are harmless or can simply be cured by an over-the-counter treatment. As De Swaan puts it:

> "A proto-professional individual is someone who knows in which matters he is a layman and who is an expert in those matters" (1979:9).

So, the three elements 'network', 'knowledge' and 'control' together constitute the attribute of proto-professionalization, and this attribute determines an individual's predisposition to use health services.

Toward an operational measure

The theory on proto-professionalization is not based on the results of empirical research. It is made plausible on many points, but it is not tested in its entirety. The first step toward the development of an operational measure of proto-professionalization was taken in the 'Nijmegen Health Area Project', a population-based survey on the adequacy of health services use and other illness behavior in the Netherlands (Furer and Persoon, 1987). Based on the outcomes of this study, the Dutch Central Bureau of Statistics included an instrument for proto-professionalization in the Continuous Health Interview Survey

1991. The psychometric properties of this instrument were analyzed in a study by Geurts and Furer (1992). The instrument measures the following elements:

a. the social circles one moves in (the social nearness of medical professionals)
b. the degree to which one interprets daily experiences according to professional insights (the knowledge of health-related matters)
c. the degree to which one holds professional attitudes and beliefs, i.e., not disclaiming responsibility for one's own health (locus of control)
d. being capable or willing to discuss health-related matters with members of the social network.

Geurts and Furer (1992) consider all four elements to be aspects of proto-professionalization. In the Nijmegen Health Area Project (Furer and Persoon, 1987), the first three elements are regarded as aspects of proto-professionalization; the fourth element is considered to express a psychological openness for other persons' problems. Since the four elements are highly intercorrelated, both studies apply one composite measure of proto-professionalization/openness, consisting of all four elements.

We choose not to include the fourth element in an operational measure of proto-professionalization. First, it is questionable whether this characteristic should be regarded as a component part of the concept. In the light of our conceptual scheme (Figure 4.1) we consider 'capability or willingness to discuss health-related matters' as a separate attitudinal characteristic, i.e., as an outcome of a process of proto-professionalization.

Secondly, there is no consensus in the literature about what the function of 'discussing problems' is. Suchman (1966) also examined the likelihood to discuss problems in relation to health orientation and social structure, but the outcomes of his study were somewhat contradictory. He found that people with a scientific health orientation were more likely to discuss their symptoms with members of their social group than the popular oriented, but the social structural variables showed an inverse pattern: members of cosmopolitan groups were less likely to discuss their symptoms than members of parochial groups. He explains this by assuming that discussion of one's symptoms with others serves different functions for parochial and cosmopolitan group members. The former are probably more likely to seek sympathy and support while the latter are more likely to seek information and advice. On the other hand, Freidson (1970) assumes that cosmopolitans have less need for advice, since they are better informed themselves. Freidson's assumption appears to fit better within our theoretical framework: proto-professionalized people are probably less likely to need advice, since they are more capable of giving an adequate diagnosis of their own health problem and

their need for professional intervention. In short, the propensity to discuss health problems is a difficult concept to operationalize, without a clear understanding of what the function of these discussions may be.

Empirical support

According to the findings of the Nijmegen study (Furer and Persoon, 1987), high scores on 'proto-professionalization' are associated with earlier recognition of signs and symptoms, more subsequent help-seeking and illness behavior, and more preventive health behavior. Individuals scoring high on proto-professionalization have better perceived health, fewer chronic conditions versus more minor (non-chronic) complaints, and fewer severe psychiatric problems versus more minor psychosocial problems. The authors argue that proto-professionalized persons appear be more alert on their health, which causes them to recognize and act upon health problems in an earlier stage, thus reducing the chance of exacerbation of minor problems into severe chronic conditions. The lower alertness of less proto-professionalized persons with respect to minor symptoms supposedly leads them to recognize health problems at a later stage. Accordingly, analysis of illness behavior of subjects reporting health problems, will show more health care use in the less proto-professionalized groups.

International research that explicitly deals with the concept of proto-professionalization is hardly to be found. However, the separate elements 'knowledge', and 'sense of control' have been used as explanatory variables in various studies on differences in health care behavior. Greater health-related knowledge is related to higher levels of utilization of less familiar or less 'common' health services, such as social services (Wan and Odell, 1981) and alternative practitioners (Furnham and Forey, 1994). Apparently, people who have a low knowledge of available services have more difficulty finding their way in the circuit of non-medical services. The relationship between health-related knowledge and preventive health behavior is less clear: knowledge is not necessarily translated into preventive practices. Neither is awareness of the role of behavior in disease necessarily related to the strength of beliefs about the importance of these behaviors for health maintenance. Probably the influence of health-related knowledge on preventive health behavior is modulated by factors such as the perceived benefit of the activity, self-efficacy, and the social context (Wardle and Steptoe, 1991; Backett, 1992; Nourjah et al., 1994; Steptoe et al., 1995).

Research applying the locus of control construct shows that, at the same level of health need, individuals who believe that powerful others are in control will use more health services. Also, external doctor and chance orientations are associated with higher expectations of health care

(Kooiker, 1996). In addition, locus of control appears indirectly to affect care utilization through its effect on health status, with internals being healthier than externals (Ranchor, Sanderman and Van den Heuvel 1990, Goldsteen, Counte and Goldsteen, 1994; Wallhagen et al., 1994). Locus of control is related to preventive health behavior as well, with internally oriented people exhibiting less risk behaviors, and people with a chance orientation showing a more risky lifestyle, less self-initiated preventive care, and less optimism concerning the efficacy of early treatment (Seeman and Seeman, 1983; Birkimer, Johnston and Dearmond, 1993). Several studies have related the two concepts of sense of control and health-related knowledge: a lack of knowledge is accompanied by feelings of helplessness and external (doctor and chance) orientations (Cassee, 1973; Merkle and Treagust, 1993; Dupen et al., 1996). Furthermore, the level of health-related knowledge is closely related to educational level, and can be considered as a consecutive aspect of SES (Farrow, Charny and Lewis, 1990; Tax, Furer and König-Zahn, 1990). Locus of control is related to social class as well. A higher educational level and employment stability are associated with a greater sense of control over one's health and life (Furnham and McDermott, 1994; Goldsteen, Counte and Goldsteen, 1994; Ross and Wu, 1995).
In short, although research on the concept of proto-professionalization is scarce, ample empirical evidence exists for the interrelations between the elements constituting proto-professionalization, and for their associations with health care use and preventive health behavior.

Study objectives

The purpose of this study is to develop and validate an index for proto-professionalization. Although the concept has not yet been used in international empirical research, it appears to offer an important theoretical framework that may add to our understanding of variations in health-related behavior. By extending the Dutch validation research to a non-western setting, this study also enhances our insight into the cross-cultural applicability of the concept of proto-professionalization.
To determine the construct validity we examine whether the instrument is embedded in the proposed theoretical framework of relationships with other concepts. Since the instrument assumes to measure medical professional knowledge and attitudes among the lay population, one may expect to find the highest degree of proto-professionalization among people working in health care and adjacent sociocultural occupations. De Swaan hypothesizes that formal education play an important role in transferring professional knowledge and attitudes to the lay population. Therefore, people working in teaching professions may be expected strongly to endorse the contents of the instrument as well. In the study

by Geurts and Furer (1992), these expectations were largely confirmed: people occupied in the medical and social sectors had the highest scores on proto-professionalization. Those working in teaching professions also had higher scores than people from other occupational sectors, but the difference largely disappeared after adjustment for sociodemographic characteristics of the subjects under study.

A second method of validating the instrument is to examine whether it can replicate sociodemographic variations in proto-professionalization found in prior studies. In the Nijmegen Health Area Project (Furer and Persoon, 1987) it was found that proto-professionalization is stronger among people with a higher educational level, a higher income, and/or a private health insurance. The study by Geurts and Furer (1992) showed that, after adjustment for other sociodemographic characteristics, educational level was the only SES variable that contributed significantly to proto-professionalization. In both studies, younger people had higher scores than older people, with the age group of 24-44 years scoring highest. Furthermore, women were slightly more proto-professionalized than men. So, in our study we expect to find the highest scores on proto-professionalization among the higher socioeconomic classes, in particular the higher educated, among people aged 24-44, and among women.

Finally, to put the instrument to the test, we examine the relationships of proto-professionalization with both the propensity to use health services for common illnesses, and the subjects' beliefs regarding the positive effects of health behavior. Since proto-professionalized people have more knowledge of health-related matters, and do not disclaim responsibility for their own health, they will show less dependency in illness and will be more selective about which health problems they present to a professional. Therefore, we expect that people who are more proto-professionalized will be less inclined to use health services for common illnesses.

To enable lay people to optimally apply the professional beliefs concerning the prevention of diseases, these beliefs must be compatible with the lay population's view of life. Because of their greater health-related knowledge, their less external health orientations, and their social nearness to health professionals, proto-professionalized people will more strongly endorse professional health beliefs. Therefore, we expect that people who are more proto-professionalized will have stronger beliefs regarding the positive effects of health behavior.

4.2 Method

Subjects

The sample under study consists of non-institutionalized inhabitants of Curaçao, aged 18-99 years. Curaçao is one of the five islands of the Netherlands Antilles, located in the Caribbean, which form part of the Kingdom of the Netherlands. Curaçao has a population of 144.000. The multicultural island hosts people of approximately 40 nationalities (Central Bureau of Statistics, 1993). The majority of the population is of African descent.
The data are derived from the Curaçao Health Study, a health interview survey on the population's health status, lifestyle, and health care use, which was carried out in 1994 (Alberts et al., 1996). In total 2248 people were surveyed in face-to-face interviews by trained interviewers. Together these people make up 85.3% of a randomly selected sample drawn from the Curaçao Registry Office. As for geographic distribution and mean age, the sample represents the adult non-institutionalized population. Women are slightly over represented, as they make up 57.2% of the sample [95% C.I: 55.0-59.2], whereas 54.3% of the population are women.

Instruments

Curaçao, like other countries in the region, is a multilingual island. This means that the survey questionnaire had to be translated into the main languages used on the island, i.e., Papiamentu, Dutch, Spanish, and English. During translation considerable attention was devoted to achieving both semantic comparability and conceptual equivalence between the translated questionnaires[1]. In the present study 93.1% of the

[1] The instruments were translated by professional translators who tried to render the original wordings as literally as possible. Because Papiamentu has a relatively small vocabulary and because considerable differences between the official written language and the spoken language exist, the Papiamentu version of the questionnaire was evaluated and 'culturalized' by a group of people with expert knowledge of the popular language. Semantic comparability of the different versions was established by a panel of proofreaders. The criterion for equivalence was whether the meanings of the questions in their translated forms were interpreted in the same way by the members of the panel. The condition of conceptual equivalence is met when it can be shown that responses to questions are indicators of the same concept. The conceptual equivalence of the Papiamentu and Dutch questionnaires was established in a pilot study (Alberts et al., 1993). The other two versions could not be piloted because Spanish and English are spoken by a minority of the population. Therefore, those two language groups were not sufficiently represented in the pilot sample.

interviews were conducted in Papiamentu, 5.2% in Dutch, 1.0% in English, and 0.7% in Spanish.
The following instruments were used:

Knowledge of health-related matters

Two instruments were used, one measuring knowledge of health behavior and the other measuring knowledge of available health services. The first list contains 10 statements on health behavior covering basic knowledge on topics such as alcohol and tobacco use, healthy eating habits, and safety behavior. The second instrument contains 7 statements on existing health services. The subjects were asked to indicate whether the statements are true or false. For each list, a sum score was calculated by counting the number of correct answers. Higher scores indicate more health-related knowledge.

Sense of control

In this study short forms of the external dimensions of the Multidimensional Health Locus of Control Scale by Wallston, Wallston and DeVellis (1978) were used, in combination with one internal dimension of the Internal Health Locus of Control Beliefs Scale by Marshall (1991). The combined instrument consists of the following dimensions:

- Self-mastery (4 items): this internal orientation, comparable to Bandura's concept of *self- efficacy* (Bandura, 1982), refers to the subject's perceived own capacity actually to obtain desired outcomes, in this case: coping with health problems.
- External chance orientation (4 items): the degree to which a person attributes changes in his or her health situation to fate or chance;
- External doctor orientation (4 items): the degree to which a person attributes his good health or recovery from illness to the positive influence of powerful others, in this case: physicians.

The latter dimension only measures the subject's orientation toward positive influences of powerful others. However, in Caribbean and Latin-American communities, which are more accepting of the supernatural and mystic experiences, the belief that ill-disposed others may exert negative influence on someone's health also plays an important role. This aspect of the lay culture may also influence help-seeking behavior. It may lead a patient to believe that his or her health problem could be due to a curse or a spell and not to what professionals call 'disease'. In this case patients could choose to move from modern medicine to self-medication or traditional healers (Arrindell, Van Faassen and Pereira, 1985; Morley, Wykes and MacCarthy, 1991; Wouters, 1992; Alberts et al., 1993). Therefore a fourth dimension was added to the scale, i.e.,

- External magic orientation (4 items): the degree to which a person attributes health problems or illness to the negative influence of powerful others.

Research has shown that this dimension has good reliability ($\alpha = .75$) and an adequate construct validity (Alberts et al., 1993).
Sum scores were calculated for each dimension. A higher score on the first dimension indicates a stronger sense of self-mastery. Higher scores on the three external dimensions indicate a *lesser* orientation toward chance, doctors and/or magic.

The social nearness to health professionals

To establish the social nearness to health professionals, the respondents were asked to indicate which professions are represented in their family, circle of friends or acquaintances. A list of 10 professions was ticked off. Only people with whom the respondent has regular contact were included. A sum score was obtained by adding up the number of professions represented in the subject's social network.

Propensity to use health services for common illnesses

To measure the inclination to use health services when having a common health problem, an adapted and shortened version of a questionnaire developed by Mootz (1981) was used. The list contains 5 items describing concrete somatic symptoms (e.g., "You wake up feeling feverish"). For each situation the subject has to answer what he or she would do at that moment. There are five ordinally ranged alternatives, ranging from 'immediately call or visit a doctor' to 'pay no attention to it'. The item scores are summed without weighing. A higher sum score indicates a stronger propensity to use health care.

Health beliefs

To determine the subjects' beliefs regarding the positive effects of health behavior, a shortened 16-item version of a questionnaire developed by Wardle and Steptoe (1991) was used, covering the areas of consciously eating healthy, healthy lifestyle patterns, preventive behavior, and safety behavior. Subjects are asked to rate the importance of each healthy behavior (e.g., "Eat fruits regularly") on a ten-point scale, ranging from 1 (of very little importance) to 10 (of very high importance). An overall sum score is calculated, with a higher score indicating stronger health beliefs.

Sociodemographic variables

Age - Four age groups are distinguished: early adulthood (18-24), adulthood (25-44), middle age (45-64), and older age (65+).
Educational level - Three groups are formed based on the participants' highest level of education, including both regular education and other

vocational training or courses, i.e., 'low' (no education, primary school), 'middle' (lower secondary education), and 'high' (higher secondary education, higher vocational education, academic education).
Net household income - The income scores are divided into three groups ('low' 'middle' and 'high'), each consisting of about 33% of the respondents.
Occupational prestige - The occupation of the subject and of his/her partner (if participant is married, living together or widowed) has been coded according to the International Standard Classification of Occupations (ISCO-88), which attaches a four-digit nominal code to each occupation. For the classification of the occupations according to their prestige, we recoded the nominal data into Treiman's International Prestige Scale, ranging from 0 to 100 (Ganzeboom, De Graaf and Treiman, 1992). The occupational prestige of participants who are married, living together or widowed, is determined by the highest prestige score of either partner. The prestige scores are divided into three groups ('low' 'middle' and 'high'), each consisting of about 33% of the respondents.
Occupational sector - The classification of participants' occupational sector is based on the main categories of the ISCO-88. Only the participant's own occupation, and not that of his/her partner, is counted in. Participants who are currently not employed or who are retired are classified according to their last occupation.

Statistical analysis

The first step in the analysis is to determine the reliabilities (Cronbach's α) and the intercorrelations of the separate instruments. To be considered for inclusion in the subsequent factor analysis, an instrument has to correlate significantly with the other instruments.
The next step is to look for one factor that represents a common theoretical dimension underlying the selected instruments. Criterion for inclusion in the final factor matrix is a factor loading $>.40$. An index of proto-professionalization is obtained by calculating a factor score for each respondent.
Differences in mean factor scores between respondents from the various occupational sectors are analyzed using a Scheffe test, i.e., a multiple comparison procedure for pairwise comparisons of means. Differences in mean scores between the distinguished sociodemographic groups are analyzed using ANOVA. The results are presented in a Multiple Classification Analysis Table, showing deviations from the grand mean both before and after adjustment for covariates. Ordinary-least squares

regression analysis was used to examine the relationships of proto-professionalization with health beliefs and the propensity to use health services.

4.3 Results

Preliminary analyses

Table 4.1 shows that the reliabilities of the locus of control dimensions and the variable indicating 'social nearness to professionals' are good, with Chronbach's α ranging from .71 to .80. The reliabilities of the 'knowledge' scales are less good. This problem was also encountered in the study by Geurts and Furer (1992).

Table 4.1
Descriptive statistics and reliabilities of the instruments

	# items	N	mean	s.d.	min-max	skew-ness	α
Knowledge							
of health behavior (---> more)	10	2220	7.5	1.8	0-10	-0.7	.52
of health services (---> more)	7	2223	4.6	1.6	0-7	-0.5	.54
Health locus of control							
Doctor orientation (---> less)	4	2222	14.2	4.9	4-24	0	.74
Magic orientation (---> less)	4	2219	17.4	4.7	4-24	-0.6	.74
Chance orientation (---> less)	4	2218	13.7	4.8	4-24	0.2	.74
Self mastery (---> more)	4	2220	15.6	4.8	4-24	-0.3	.80
Social nearness of professionals							
No. of professions in network (---> more)	10	2234	1.7	1.9	0-10	1.4	.71

Table 4.2
Matrix of Pearson's product-moment coefficients, and factor matrix of selected variables (n=2204)

	Pearson's r						Factor loadings
	1	2	3	4	5	6	
Knowledge							
1 of health behavior (---> more)							.63
2 of health services (---> more)	.35**						.45
Health locus of control							
3 Doctor orientation (---> less)	.27**	.15**					.73
4 Magic orientation (---> less)	.33**	.17**	.47**				.75
5 Chance orientation (---> less)	.30**	.14**	.51**	.50**			.75
6 Self mastery (---> more)	-.07**	.00	.02	-.16**	-.26**		--
Social nearness of professionals							
7 No. of professions in network (---> more)	.19**	.19**	.20**	.20**	.22**	.00	.45
Eigenvalue							2.46
Percentage of variance							40.9

* $p < .01$
** $p < .001$

The scores on the separate instruments are sufficiently normally distributed. The variable measuring 'number of professions in network' has a somewhat skewed distribution, but the skewness coefficient is within acceptable ranges.
A matrix of product-moment correlations between the variables is shown in Table 4.2. The two knowledge scales correlate .35. The intercorrelations among the three external locus of control dimensions are quite high, with Pearson's product-moment coefficients ranging from .47 to .51. The self-mastery dimension of the locus of control scale is not significantly related to doctor orientation and, contrary to the expectations, a higher score on self-mastery is associated with stronger chance orientation and stronger magic orientation. Furthermore, self-mastery shows hardly any association with knowledge.
External locus of control, knowledge, and social nearness to professionals all show correlations in the hypothesized direction: the three external locus of control dimensions correlate .27 to .33 with knowledge of health behavior and correlate .14 to .17 with knowledge of health services. The number of professions in a person's social network is positively associated with knowledge and inversely associated with external orientations ($r = .19$ to .22).
Following Geurts and Furer (1992), we have not included the self-mastery dimension in the instrument. The 'knowledge' scales are included in the instrument, with the reservation that these indicators

Table 4.3
Degree of proto-professionalization by occupational sector: differences in mean factor scores (Scheffe test)

Occupational sector	N	Mean factor score	Differences between occupational sectors 1	2	3	4	5
1 Health care and sociocultural	67	1.04					
2 Education	68	.99	ns				
3 Clerical and administrative	641	.44	*	*			
4 Sales and services	633	-.24	*	*	*		
5 Agricultural and industry	488	-.33	*	*	*	ns	
6 No occupation	305	-.35	*	*	*	ns	ns

ns not significant
* $p < .01$

require improvement. Table 4.2 shows the factor matrix of the selected variables (one factor solution). All variables load high on the first factor, which has an Eigenvalue of 2.46 and explains 40.9% of the total variance. The reliability of the overall construct is satisfactory (Cronbach's α computed from the six scales is .69).
For each respondent we calculated a factor score on proto-professionalization. A higher factor score points to more knowledge of health-related matters, a stronger sense of control (i.e., lower external orientations), and more professions in one's social network (See Appendix for the items of the six scales included in the instrument).

Main analyses

To test for the validity of the constructed instrument, we examined to what extent the mean factor scores of the respondents differ according to occupational sector. Table 4.3 shows the mean scores of the various occupational groups. The differences between the groups confirm our expectations: people working in medical and sociocultural occupations, and those who are occupied in the educational sector have comparably high scores on proto-professionalization, which are significantly higher than those of all other occupational groups. People occupied in the clerical and administrative sectors take an intermediate position; they have significantly lower scores than the medical, sociocultural, and educational occupations, but higher scores than the other occupations. Those who do not have and never had an occupation (mainly homemakers and students) have the lowest scores.
A person's occupational sector can be associated with socioeconomic status, sex or age. Therefore, we also analyzed the main effect of occupational sector, with covariates age, sex, educational level, income, and occupational prestige. Table 4.4 shows the deviations from the grand mean, both unadjusted and adjusted for the other independent variables. After adjustment for the covariates, the effect of occupational sector, though less strong, is still significant.
Given the results of previous studies, we also hypothesized that proto-professionalization would be strongest among people aged 25-44 years, among women, and among the higher socioeconomic classes, especially the higher educated. Table 4.4 confirms that the group aged 25-44 years scores highest on proto-professionalization, and that the mean scores decrease with rising age. Also the youngest age group -the group that is still in the 'learning phase'- shows a lower mean score. After adjustment for the covariates the main effect of age, though still significant, drastically reduces. No significant gender effects were observed in this study. The unadjusted effect of educational level shows that higher educated respondents have significantly higher scores on

Table 4.4

Degree of proto-professionalization: multiple classification analysis, deviations from the grand mean score (n=1762)

	Degree of proto-professionalization			
	Unadjusted		Adjusted	
		eta[a]		beta[b]
Occupational sector				
Health care and sociocultural	0.98		0.53	
Education	0.93		0.40	
Clerical and administrative	0.40		0.16	
Sales and services	-0.29		-0.09	
Agriculture and industry	-0.35		-0.21	
No occupation	-0.52		-0.21	
	F=93.8, p<.001	0.44	F=12.1, p<.001	0.20
Age				
18-24 years	-0.17		-0.14	
25-44 years	0.21		0.08	
45-64 years	-0.05		-0.04	
65 years and older	-0.53		-0.08	
	F=32.8, p<.001	0.24	F=4.7, p<.01	0.08
Sex				
Men	0.00		-0.06	
Women	0.00		0.05	
	N.S.	0.00	N.S.	0.05
Educational level				
Low	-0.65		-0.38	
Middle	-0.15		-0.09	
High	0.57		0.34	
	F=326.1, p<.001	0.48	F=107.3, p<.001	0.28
Income				
Low	-0.48		-0.17	
Middle	-0.11		-0.05	
High	0.46		0.17	
	F=152.7, p<.001	0.39	F=16.3, p<.001	0.14
Occupational prestige				
Low	-0.42		-0.11	
Middle	-0.11		-0.04	
High	0.48		0.14	
	F=165.4, p<.001	0.38	F=8.3, p<.001	0.10

a The gross effect (eta) refers to the ability of a predictor variable to explain variation in the dependent variable without taking other predictors into account

b The net effect (beta) refers to the ability of a predictor variable to explain variation in the dependent variable while the effects of all other predictors are controlled

proto-professionalization than their lower educated counterparts. The effect is somewhat reduced after adjustment for the covariates, but the unique contribution of educational level remains strong. People of the higher income groups and those with higher occupational prestige also score higher on proto-professionalization, both before and after adjustment for the other variables. In agreement with our expectations, these SES indicators contribute less to proto-professionalization than educational level does.

Table 4.5
Correlations of (the elements of) proto-professionalization with propensity to use health services and health beliefs (n=1753)

	Propensity to use health services (---> stronger)		Health beliefs (---> stronger)	
	Pearson's r	Partial corr.[a]	Pearson's r	Partial corr.[a]
Proto-professionalization (---> more)	-.26**	-.21**	.16**	.12**
Knowledge				
of health behavior (---> more)	-.07*	-.03	.19**	.16**
of health services (---> more)	-.04	-.00	.12**	.09**
Locus of control				
Doctor orientation (---> less)	-.39**	-.36**	.02	-.01
Magic orientation (---> less)	-.16**	-.11**	.11**	.07**
Chance orientation (---> less)	-.17**	-.12**	.10**	.07**
Social nearness of professionals	-.09**	-.05*	.09**	.07**
Nc. of professions in network (---> more)				

* $p < .01$
** $p < .001$
[a] Partial correlations after adjustment for sex, age, educational level, income, and occupational prestige

The last step in our validation analysis is to examine whether the constructed index is useful in explaining variations in subjects' propensity to use health services, and in their health beliefs. Table 4.5 shows the bivariate correlations between proto-professionalization and both outcome measures, as well as the partial correlations after adjustment for sex, age, and SES. As we expected, people who are more proto-professionalized are less inclined to use health services for common illnesses, and have stronger beliefs regarding the positive effects of health behavior.
Table 4.5 also shows how the separate elements of the index (knowledge, control and network) are related to the propensity for using services and to health beliefs. The strength of the relationships varies, with locus of control (especially doctor orientation) appearing to be more important in explaining propensity to use services, and knowledge of health behavior playing a more important role in explaining health beliefs. However, and more important, the separate elements constituting 'proto-professionalization' do not show any contradictory correlations with the outcome measures. This finding supports our notion that the elements represent one underlying theoretical concept.

4.4 Discussion

In this study we have constructed and validated a measure for 'proto-professionalization'. Up to now the concept has only been applied in empirical research in the Netherlands. By analyzing the psychometric properties of an index for proto-professionalization in Curaçao, the study enhances our insight into the cross-cultural applicability of this sociocultural concept.
The constructed index encompasses three elements: health related-knowledge, locus of control, and social nearness to health professionals. As compared to the instrument constructed in the Netherlands (Geurts and Furer, 1992) our index covers more aspects of the 'knowledge' and 'control' elements. The Dutch instrument measures 'knowledge of health services'; we added a measure for 'knowledge of health behavior'. In both instruments the knowledge scales have rather moderate reliabilities. Geurts and Furer (1992) attributed the moderate scalability of their knowledge items to high percentages of 'don't know' answers, and answering tendencies. This appears not to be the case in our study. An alternative explanation is that individuals with low overall health-related knowledge may have high knowledge of specific aspects of health and the health care system, based on their disease history and experiences with

health care[2]. This would reduce the scalability of the items, but would not necessarily affect the content validity of the instrument.
In addition to the external locus of control dimension 'doctor orientation' included in the Dutch instrument, our index also encompasses chance and magic orientations. It is noteworthily that the three external locus of control dimensions relate in the same way to the knowledge and network variables. Also, these three variables show no opposite relationships with health beliefs and propensity to use health care. Our data support the findings of several past investigations, suggesting that health locus of control contains two dimensions only, i.e., an internal and an external dimension (Winefield, 1982; Coelho, 1985; Cooper and Fraboni, 1990). In our study, the internal (self-mastery) dimension of the locus of control scale did not show the expected correlations with the other elements, and was excluded from the instrument. The lack of any association between internal orientation and doctor orientation has also been observed in other studies (Geurts and Furer, 1992; Birkimer, Johnston and Dearmond, 1993). Dupen and colleagues (1996), in their validation study of a new multidimensional health locus of control scale, found that chance and doctor orientations were associated with less health-related knowledge but, like in the present study, the expected relationship between internal orientation and knowledge was not observed. They attribute this finding to the high mean internal orientation score of their sample, suggesting a high endorsement of internal orientation. This explanation appears not to be applicable to our sample, which had a mean 'self-mastery' score of 15.6 on a scale ranging from 4 to 24 (skewness: -0.3). Geurts and Furer (1992) also excluded this element from their index, but they did perform validation analyses on the separate internal orientation subscale. The analyses yielded that internal orientation was no valid element from a 'proto-professional' point of view, since it did not show the expected relationships with occupational sector. Therefore, we can conclude that, although self-mastery and internal orientation may be important predictors of health-related behavior, they are independent of a person's degree of proto-professionalization.
An important difference between our instrument and the instrument developed by Furer and his colleagues is that we did not include a measure for the capacity or willingness to discuss health-related matters

[2] There is some empirical support for this explanation. In the Curaçao Health Study the self-reported prevalences of chronic disorders were assessed as well (Gerstenbluth et al., 1996). As compared to the whole sample, significantly more diabetics knew the correct answer to the knowledge-item on the relationship between eating sugar and diabetes mellitus. Likewise, significantly more hypertensives knew that one can have high blood pressure without noticing it ($p < .005$). Diabetics did not have better scores on the hypertension-item, and hypertensives did not have more knowledge of diabetes.

with members of the social network. We decided to exclude this measure since there are several theoretical arguments against inclusion of this variable.
The constructed index measures important features of the lay culture, but neither our instrument nor the Dutch instrument (Geurts and Furer, 1992) covers the structural aspect 'looseness (or openness) of the social network', whereas this characteristic of the lay structure does play an important role in both De Swaan's (1979) theory of proto-professionalization as well as in the work of Suchman (1966) and Freidson (1970). In this study we did not have an adequate operational measure for 'looseness of the network' at our disposal. Possibly future research applying a sophisticated operationalization of this concept (e.g., Galaskiewicz and Wasserman, 1993; Walker, Wasserman and Wellman, 1993) could show that having a diverse, open social network is in fact an important element of proto-professionalization.
The validation analyses on the constructed instrument show satisfactory results. As we hypothesized, people occupied in the medical, sociocultural, and educational sectors have relatively high scores on the instrument. Sociodemographic variations in proto-professionalization of this study population are also similar to those found in the Netherlands (Furer and Persoon, 1987; Geurts and Furer, 1992). The highest scores are found among younger adults and among people of higher SES, in particular the higher educated. The latter finding is in keeping with the notion of De Swaan (1979) that educational level is an important determinant of proto-professionalization, and with the suggestion of Freidson (1970) that educational level may be the most useful indicator of the compatibility of a lay culture with the professional culture. Our outcomes do not support the findings of Geurts and Furer (1992) that women are more proto-professionalized than men. However, this may be more a matter of statistics than a theoretical problem: in the Dutch study a comparably small difference in mean scores between men and women was found, but probably because of the greater sample size the Dutch results did reach statistical significance.
Final evidence in support of the validity of the instrument is found in its relationships with people's propensity to use health care and their health beliefs: in accordance with our expectations, people who are more proto-professionalized are less inclined to use health services for common illnesses, and have stronger beliefs regarding the positive effects of health behavior.

The specific value of the application of the concept of proto-professionalization in research on the determinants of health-related behavior, is that it may add to our understanding of inequalities in use of health services and preventive health behavior. For several decades, the field of health care has been aware of the greater resistance to care among

the lower SES and the need to 'reach out' to these groups to secure their active participation in public health programs and their equitable access to health care. Also in Curaçao, research has shown that there are significant socioeconomic inequalities in health care use (see Chapter 3). These inequalities may partly be explained by differences in proto-professionalization between individuals of lower and higher SES.
The concept of proto-professionalization may be helpful not only in explaining differences in the probability of care use, but also in explaining differences in the type or amount of treatment that will be provided after a patient has presented to a medical care provider. When a provider is presented with a patient who is more proto-professionalized, there is a sharing of knowledge, beliefs, and normative standards of behavior. This facilitates communication between patient and provider, and may influence the decisions of the care provider concerning treatment and/or referrals. In short, the concept of proto-professionalization and its instrument offer a useful empirical specification of the sociocultural context as explanatory factor in studies on differences in health-related behavior.

5 A sociocultural explanation of health services use: the professionalized patient[1]

The Behavioral Model of Health Services Use has been criticized for not paying enough attention to social networks and culture as characteristics that predispose an individual to use services. In this chapter we attempt to meet some criticism, by applying the concept of 'proto-professionalization' to the Model. The concept refers to the degree of compatibility of the lay culture with modern medicine, and offers a useful empirical specification of an individual's sociocultural background as predisposing factor.
The study outcomes support our hypotheses that, at the same level of health care need and under the same enabling conditions, people who are more proto-professionalized will be more likely to consult a specialist or a physiotherapist. Our hypothesis that the more proto-professionalized people will be less likely to consult a GP was not confirmed. This study illustrates that the concept of proto-professionalization may prove useful in getting a better apprehension of the relative importance of predisposing sociocultural characteristics in predicting and understanding use of health services.

5.1 Introduction

A widely applied theoretical model in the research on determinants of health care use is the Behavioral Model of Health Services Use (Andersen and Newman, 1973; Aday and Andersen, 1974). The model considers the use of health services to be a function of predisposing, enabling and need characteristics of an individual. An individual's predisposition to use health services is reflected by his or her demographic, social-structural, and attitudinal-belief characteristics, all of which exist prior to the onset of an illness episode. The enabling variables in the model refer to conditions that facilitate or impede the use of services by an individual who is predisposed to seek care. Enabling conditions can be measured by financial resources (e.g., income, health insurance) and structural factors, such as professional-to-population ratios and geographic location. The need variables represent the most immediate cause of health services use. Need is usually measured by self-reports of symptoms and diagnoses, functional limitations (disabilities), and/or perceived health status.
Over the years the Behavioral Model has been subject to considerable criticism. Researchers have criticized the limited explanatory power of

[1] JF Alberts, E van Sonderen, R Sanderman, WJA van den Heuvel. Submitted.

the model, with the need variables explaining most of the variation in health care use (see, for example Mechanic, 1979). These disappointing results may partly be due to methodological flaws of the studies in question. In a recent review of the application and development of the Behavioral Model, Andersen (1995) discusses the concern that the predisposing variables have not been appropriately conceptualized and measured in much work employing the model. A possible consequence is that predisposing characteristics do not appear to be as important as they really are in predicting and understanding use. The Behavioral Model has also been criticized for not paying enough attention to social networks and culture as characteristics that predispose an individual to use services.

In this study we attempt to meet some criticism, by applying the concept of 'proto-professionalization' to the model. The concept and its instrument offer a useful empirical specification of an individual's social-structural and cultural context as predisposing factor. The demand for and supply of health care takes places in an interaction between two cultures: the lay culture of the patient and the professional culture of the health care provider. The term 'proto-professionalization' was introduced by De Swaan (1979), and refers to the degree of compatibility of the lay culture with modern medicine. The concept is grounded in the work of Suchman (1966) and Freidson (1970), who showed that social structure (parochial versus cosmopolitan) and the individual's health orientation or 'lay culture' (popular versus scientific) are important determinants of health behavior. The theory of proto-professionalization is also based on the work of Kadushin (1966) who suggests that people belong to different social circles that encourage attitudes and orientations supportive of a particular type of care.
Proto-professionalization is defined as the process in which lay people adopt insights, values, and the accompanying behavioral standards of the profession of medicine. Proto-professionalized people can be characterized as follows: they are socially near to the profession, be it through informal contacts or through work, they are the first to adopt concepts and insights (knowledge) from the profession, and they have a high sense of control, i.e., they have confidence in their own diagnosis and their own judgement of the quality of the treatment they receive. Being socially close to circles of medical professionals facilitates the obtaining of information on health-related matters. Individuals will be better acquainted with the medical system and have more knowledge of health and illness. This will increase their feelings of control and leads to less dependency in illness.
So, the three elements 'network', 'knowledge' and 'control' together constitute the attribute of proto-professionalization, and this attribute predisposes an individual to certain utilization behavior. The concept of proto-professionalization seems to provide a promising framework for

unifying what, so far, are unrelated findings from different approaches to the study of sociocultural determinants of health services use. Proto-professionalization refers to a generalized orientation, based on a complex of interrelated variables, which have in common that they promote a way of seeing the world that is compatible with the culture of medicine.

By incorporating the concept in the broader framework of Andersen's Behavioral Model, it may add to our understanding of the importance of people's predisposition to use health services in explaining differences in care use (Figure 5.1). We examine the predictive power of the concept as predisposing characteristic by testing several hypotheses about the effects of proto-professionalization on the use of health services.

In addition to proto-professionalization, the following predisposing characteristics are included in this study: the individual's sex, age, level of education, and his/her propensity to use health services for common illnesses. In the research literature this latter characteristic is referred to as 'anticipated illness behavior' (Veitch, 1995a), 'behavior intentions' (Ranchor, Sanderman and Van den Heuvel, 1990), or 'attitudes about visiting doctors for certain symptoms' (Sharp, Ross and Cockerham, 1983).

Health services use encompasses a wide range of behaviors. The relative importance of predisposing, enabling, and need characteristics may vary according to the types of health services used (e.g., physician, hospital, or dental services), and to the purpose of use, for example preventive versus curative care (Andersen and Newman, 1973). This study concentrates on the use of curative health services, and examines the use of general practitioners (GPs) as primary care providers, and the use of specialist physicians and physiotherapists who are only accessible upon referral (secondary care).

Figure 5.1
Independent variables, ordered according to the Behavioral Model of Health Services Use

Predisposing	**Enabling**	**Need**
Sociodemographic	Insurance coverage	Chronic disorders
Age	Insurance type	Short-term complaints
Sex	Income	Physical functioning
Education		General health perception
Sociocultural		
Propensity for care utilization		
Proto-professionalization		

Our first hypothesis deals with the probability of GP use. The GP is a familiar, directly accessible source of care. The decision whether or not to consult a GP is largely in the hands of the individual. In the health care system under study the GP is the 'gatekeeper': usually, the first contact people have with health care is through the GP. Proto-professionalized people are less externally oriented, they have more knowledge of health and illness, and they have more confidence in their own diagnosis. They have come to learn which kind of health problems require professional attention, and in which cases symptoms are harmless or can simply be cured by over the counter medication. So, they will be more selective in deciding which (minor) complaints require the attention of a GP:

1. At the same level of health care need and under the same enabling conditions, people who are more proto-professionalized will be less likely to consult a GP.

The specialist physician is a secondary care provider. In the health care system under study, specialists are only accessible upon referral by a GP. Use of specialists will for a larger part be determined by providers of care. Proto-professionalized people are more skilled to communicate with physicians and to influence decisions concerning referral or prescription. Given the cultural similarities between the proto-professional and the professional, a proto-professionalized person will be more capable of convincing the GP that he or she needs a specialist referral than a lay member who does not share the same culture. Furthermore, it will be easier for proto-professionalized persons to consult a specialist on their own initiative. Formally, all patients need a GP referral to consult a specialist. Nevertheless, it is likely that proto-professionals have more opportunities to bypass formal regulations, e.g., through informal contacts with physicians, or by arranging a formal GP referral afterwards. We hypothesize that:

2. At the same level of health care need and under the same enabling conditions, people who are more proto-professionalized will be more likely to consult a specialist physician.

The same line of reasoning is applicable for physiotherapy, which is also a secondary service. Moreover, it is a relatively new and less familiar profession (Alberts et al., 1996). One can assume that the more proto-professionalized individuals have been quicker in familiarizing themselves with this profession. We hypothesize that:

3. At the same level of health care need and under the same enabling conditions, people who are more proto-professionalized will be more likely to consult a physiotherapist.

5.2 Methods

Study population

The present study was done in Curaçao, a Caribbean island with a population of 144.000, located some 30 miles off the Venezuelan coast. Curaçao is one of the five islands of the Netherlands Antilles, which

Table 5.1
Descriptive data of the study sample

	n	%
Sex		
Male	794	42.9
Female	1057	57.1
Age		
18-24	229	12.4
25-44	811	43.8
45-64	594	32.1
65 and over	217	11.7
Education		
none or primary education ≤ 3 yrs	253	13.7
primary education > 3 yrs	170	9.2
lower secondary education	749	40.5
higher secondary education	454	24.5
higher vocational / academic education	225	12.2
Household income[1]		
< 1000 Naf.	518	28.0
1000-2500 Naf.	664	35.9
> 2500 Naf.	669	36.1
Health insurance		
No insurance	158	8.5
Public insurance	548	29.6
Private insurance	1145	61.9
Health status		
One or more chronic disorders	1086	58.7
One or more short-term complaints	1204	65.0
Health care utilization		
GP (in 2 months)	717	38.8
Specialist (in 2 months)	335	18.1
Physiotherapist (in 1 yr)	171	9.2
Total study sample[2]	1851	100.0

[1] 1.00 US$ = 1.80 Naf.
[2] Only cases with non-missing values on all variables were included.

form part of the Kingdom of the Netherlands. The island has a mixed public and private health insurance system. Public health care is guaranteed for inhabitants with a substandard level of income.
Data are derived from the Curaçao Health Study, a health interview survey among the non-institutionalized population aged 18 years and older. The survey was conducted in 1994 and concerned people's health status, their lifestyles, and use of health services. A randomly selected sample was drawn from the Registry Office. In total 2248 individuals were surveyed in face-to-face interviews by trained interviewers. The response rate, after excluding those who did not meet the inclusion criteria, was 85.3%.
To determine the representativity of the study sample, some demographic characteristics were compared with those of the non-institutionalized population of 18 years and older (Central Bureau of Statistics, 1993). As for geographical distribution and mean age, the study sample is representative of the population. The mean age of the study participants is 43.7 (range: 18-99 years). The sample consists of 57.2% women (95% CI: 55.0-59.2), which means that they are slightly over represented, for women make up 54.6% of the adult population. Some descriptive data of the study sample are shown in Table 5.1. Full details of the study design and sampling procedure are reported elsewhere (Alberts et al., 1996).

Instruments

Use variables

The use of GPs, specialists and physiotherapists was assessed by asking whether or not the service in question was used in the past two months (for GP and specialist consultations) or the past year (for physiotherapy consultations). Only contacts with a health service concerning the participant's own health were included. Contacts with a GP included consultations during consultation hours and by phone, as well as house calls. Use of specialists was limited to poli clinical treatment; specialist care during hospitalization was excluded.

The explanatory variables were chosen according to the Behavioral Model of Health Services Use (see Figure 5.1):

Predisposing variables

As *sociodemographic variables* we included the participants' *sex*, *age*, and *education*. Three groups were formed based on the participants' highest level of education, including both regular education and other vocational training or courses, i.e., 'low' (no education, primary school), 'middle'

(lower secondary education), and 'high' (higher secondary education, higher vocational education, academic education).
As *sociocultural variables* we included the following indicators:
An *index of proto-professionalization* was constructed from the separate indicators: social nearness to professionals ('network'), health-related knowledge ('knowledge'), and health locus of control ('control'). The number of professions (range 0-10) which are represented in the subjects' social network was used as a proxy for their social nearness to circles of professionals. Only professionals with whom the subject has regular contact were included. The individual's knowledge of health-related matters was measured with two lists of true/false statements, one covering knowledge of health behavior, the other covering knowledge of existing health services. For each list, a sum score was calculated by counting the number of correct answers. To measure external health locus of control, short forms of the external dimensions (chance orientation and doctor orientation) of the Multidimensional Health Locus of Control Scale by Wallston, Wallston and DeVellis (1978) were used. Since this study is done in a Caribbean community, which is more accepting of the supernatural and mystic experiences, (Arrindell, Van Faassen and Pereira, 1985; Morley, Wykes and MacCarthy, 1991; Wouters, 1992), a third dimension was added to the scale, i.e., external magic orientation or the degree to which a person attributes health problems or illness to the negative influence of powerful others. Research has shown that this dimension has good reliability ($\alpha = .75$) and an adequate construct validity (Alberts et al., 1993). Sum scores were calculated for each of the 4-item locus of control dimensions. Higher scores indicate a lesser orientation toward chance, doctors and/or magic.
Using Principal Component Analysis on the six composite measures we extracted one unrotated factor (Eigenvalue 2.46, 40.9% variance explained), and computed a factor score for each participant. A higher factor score points to more professionals in one's social network, more knowledge of health-related matters, and a stronger sense of control (i.e., lower external orientations). The reliability of the overall construct is satisfactory (Cronbach's α computed from the six scales is .69).
Up to now, the concept has hardly been applied in international studies. An operational measure for the degree of proto-professionalization has been developed and validated in the Nijmegen Health Area Project in the Netherlands (Furer and Persoon, 1987; Geurts and Furer, 1992) and in the Curaçao Health Study in the Netherlands Antilles (see Chapter 4). Also, the Dutch Central Bureau of Statistics included an instrument for proto-professionalization in the National Health Interview Survey 1991. The studies suggest that the measure has good psychometric properties, and that it is embedded in the proposed theoretical framework of relationships with other concepts.

The *propensity to use health services for common illnesses* was measured, using an adapted and shortened version of a questionnaire developed by Mootz (1981). The list contains five items describing concrete somatic symptoms (e.g., "You wake up feeling feverish"). For each situation the subject has to answer what he or she would do at that moment. There are five ordinally ranged alternatives, ranging from "pay no attention to it" to "immediately call or visit a doctor". The item scores are summed, with a higher sum score indicating a stronger propensity for using health care.

Enabling variables

Three enabling variables were included, i.e., *insurance coverage* (yes/no), *private health insurance* (versus public health insurance), and *net household income*. Three percentile groups with 'low', 'middle' and 'high' income were constructed.

Need variables

The following health measures were used:
Chronic disorders - The participants were presented with a list of 33 chronic conditions (Gerstenbluth et al., 1996). For each disease the subjects were asked whether they have suffered from it in the past 12 months. For this study the scores of the participants were dichotomized into 'no chronic disorders' versus 'one or more chronic disorders'.
Short-term complaints - Subjects were asked about the presence of 22 symptoms covering most body systems in the past 14 days (Marmot et al., 1991). The scores of the participants were dichotomized into 'no short-term complaints' versus 'one or more short-term complaints'.
Physical functioning - This dimension of the RAND 36-item health survey measures limitations in performing daily activities resulting from health problems (Hays and Sherbourne, 1992; Van der Zee et al., 1996). The scores on the 10 items were coded, summed and transformed onto a scale ranging from 0 (best health) to 100 (worst health).
General health perception - This 5-item instrument is also a dimension of the RAND-36, and has the same coding algorithm. It measures the subjective evaluation of a person's general health status.

Analysis

Variations in health care use were analyzed using logistic regression, since the dependent variable is dichotomous (i.e., whether or not the services in question were used). Adding of the predisposing, enabling and need variables to the regression equation was controlled by separately forcing each block of variables into the equation. In this way, the effects of the explanatory variables were adjusted for the effects of all variables entered, including possible non-significant ones. The ordinal predisposing

Table 5.2
Correlation matrix of independent variables

	1	2	3	4	5	6	7	8	9	10	11
Need											
1 General health perception (--> worse)											
2 Physical functioning (--> worse)	.39**										
3 Chronic disorders (0=no 1=yes)	.34**	.29**									
4 Short-term complaints (0=no 1=yes)	.29**	.17**	.28**								
Enabling											
5 Insurance coverage (0=no 1=yes)	-.02	.01	.09**	.01							
6 Private insurance (0=no 1=yes)	-.16**	-.17**	-.05	-.07*	--						
7 Income (--> higher)	-.18**	-.19**	-.11**	-.07*	.07*	.48**					
Predisposing											
8 Sex (0=male 1=female)	.16**	.14**	.15**	.12**	.08**	-.13**	-.17**				
9 Age (--> older)	.12**	.40**	.18**	-.03	.06	-.11**	-.15**	-.02			
10 Education (--> higher)	-.16**	-.25**	-.14**	-.02	.03	.41**	.49**	-.16**	-.40**		
11 Use propensity (--> higher)	.04	.04	.06	-.06	.03	-.06	-.09**	.02	.07*	-.15**	
12 Proto-professionalization (--> higher)	-.12**	-.15**	-.09**	-.02	.04	.27**	.34**	.01	-.18**	.45**	-.23**

* $p < .05$
** $p < .005$

variables were transformed into contrast variables by creating three percentile groups with 'low', 'middle', and 'high' scores.
The hypotheses were tested by showing the effects of proto-professionalization, controlling for the other predisposing variables plus enabling and need variables. Preceding this analysis, we first examined the crude effects of proto-professionalization, and the effects of proto-professionalization, controlling for the more 'usual' predisposing variables (sex, age, education, propensity for use).
To determine the goodness-of-fit of the models, we calculated a pseudo-R^2 (Shea, Streit and Smyer, 1994). The pseudo-R^2 gives an estimate of the minimal percentage of variance explained, but does not have an absolute meaning like R^2 in OLS regression analysis, since it is not known to what extent the total variance (the initial log likelihood function) can be explained. Therefore, looking at relative improvements in the explained variance is more meaningful (R^2-change).

5.3 Results

Preliminary analysis

Table 5.2 depicts the correlations between the independent variables. The predisposing variables show the following interrelations: proto-professionalization is positively associated with education, and inversely related to age and propensity for using health care. Proto-professionalization is also related to enabling characteristics: proto-professionalized people more often have private health insurance and have a higher income. There are some weak associations between proto-professionalization and need variables: a higher degree of proto-professionalization tends to be associated with a more favorable health status. The subjects' level of education shows similar, though stronger, associations with the enabling and need variables, whereas age and female gender are oppositely related with the enabling and need variables. In other words: more favorable enabling conditions and a lesser need for care are associated with a higher degree of proto-professionalization, a higher educational level, younger age, and being male.

Main analysis

Table 5.3 shows the different models for GP use. The data do not confirm our hypothesis on the use of GPs: proto-professionalization does not appear to affect the likelihood of consulting a GP. The other predisposing characteristic 'propensity to use health services for common illnesses' significantly affects GP use: the stronger the propensity for

Table 5.3

GP utilization: Odds ratios of predisposing, enabling and need variables for probability of use(n=1851, 95% confidence intervals in parentheses)

		Block 1: protoprof	Block 1: sex, age education, propensity Block 2: protoprof	Block 1: need & enabling var's Block 2: sex, age education, propensity Block 3: protoprof
Need				Pseudo-R^2: 4.52%
General health perception[1]				1.00 [0.99-1.01]
Physical functioning[1]				1.00 [0.99-1.01]
Chronic disorders (0=no 1=yes)				1.65** [1.32-2.07]
Short-term complaints (0=no 1=yes)				1.50** [1.20-1.89]
Enabling				
Insurance coverage (0=no 1=yes)				2.73** [1.69-4.41]
Private insurance (0=no 1=yes)				1.38* [1.06-1.79]
Income	low			1.00
	middle			0.98 [0.75-1.28]
	high			0.95 [0.70-1.29]
Predisposing			Pseudo-R^2: 2.39%	Pseudo-R^2: 6.31% R^2 change: 1.79%
Sex (0=male 1=female)			1.92** [1.57-2.34]	1.69** [1.37-2.08]
Age[2]			1.00 [0.99-1.01]	1.00 [0.99-1.01]
Education	low		1.00	1.00
	middle		1.24 [0.92-1.66]	1.22 [0.89-1.66]
	high		1.22 [0.89-1.68]	1.10 [0.77-1.57]
Use propensity	low		1.00	1.00
	middle		1.30* [1.01-1.66]	1.33* [1.03-1.71]
	high		1.62** [1.27-2.07]	1.64** [1.28-2.11]
				Improvement: p=.000
		Pseudo-R^2: 0.00%	Pseudo-R^2: 2.40% R^2 change: 0.01%	Pseudo-R^2: 6.32% R^2 change: 0.01%
Proto-professionalization	low	1.00	1.00	1.00
	middle	1.00 [0.79-1.26]	1.04 [0.81-1.32]	1.06 [0.83-1.37]
	high	1.01 [0.80-1.27]	1.05 [0.80-1.37]	1.06 [0.80-1.40]
		Improvement: p=.988	Improvement: p=.934	Improvement: p= .879

* $p < .05$

** $p < .005$

1 These continuous variables range from 0 (best health) to 100 (worst health). Odds ratios for increases with one unit.

2 Odds ratio for increase with one year

using services, the greater the likelihood of consulting a GP. This is the case both before and after taking into account the effects of need and enabling variables. Women are more likely to see a GP than men. Having a health insurance clearly affects the likelihood of consulting a GP. Also, individuals who are privately insured are more likely to see a GP than those who have public insurance. As was to be expected, the need variables play a significant role: chronic morbidity heightens the odds of consulting a GP, as does having one or more short-term complaints.
As for specialist use (Table 5.4), the crude effects of proto-professionalization and the effects after adjustment for the other predisposing variables are non-significant. However, the outcomes of the full model confirm our hypothesis concerning the use of specialists: after taking into account the effects of enabling and need variables, highly proto-professionalized people are more likely to consult a specialist. An individual's use propensity does not appear to affect the likelihood of consulting a specialist. As for the predisposing sociodemographic variables, we see that the odds of consulting a specialist are higher for women and older people. The individual's educational level also has a significant positive effect on the probability of consulting a specialist. The enabling variables show the same effect as for GP use: having health insurance and being privately insured heightens the odds of seeing a specialist. Again the need variables play an important role: individuals who are more limited in performing daily activities, and those who have one or more chronic disorders are more likely to consult a specialist.
Table 5.5 shows that proto-professionalization significantly affects the likelihood of consulting a physiotherapist in all three models. The crude odds ratios of proto-professionalization show that highly proto-professionalized individuals are more than twice as likely to consult a physiotherapist than people with a low level of proto-professionalization. After entering the other predisposing variables into the regression equation, the effect of proto-professionalization slightly reduces, but adding of this variable still yields a significant improvement. The full model confirms our hypothesis: after taking into account the effects of enabling and need variables, highly proto-professionalized people are more likely to consult a physiotherapist. In the full model the other predisposing characteristics do not appear to affect the likelihood to see a physiotherapist, be it that in the odds ratios for people with a medium propensity level are somewhat lower. The insurance status of the patient tends to affect the probability of physiotherapy use in the same way as it does GP and specialist use, but the differences do not reach statistical significance. The income level, on the other hand, has a strong positive effect on the use of physiotherapy: people from the highest income group are more than three times as likely to see a physiotherapist than those of the lowest income group. The need variables show the same effect as they did for specialist use: being limited in performing daily activities and

Table 5.4

Specialist utilization: Odds ratios of predisposing, enabling and need variables for probability of use (n=1851, 95% confidence intervals in parentheses)

		Block 1: protoprof	Block 1: sex, age education, propensity Block 2: protoprof	Block 1: need & enabling var's Block 2: sex, age education, propensity Block 3: protoprof
Need				Pseudo-R^2: 8.90%
General health perception[1]				1.00 (0.99-1.01)
Physical functioning[1]				1.01** (1.01-1.02)
Chronic disorders (0=no 1=yes)				2.93** (2.12-4.05)
Short-term complaints (0=no 1=yes)				0.84 (0.63-1.12)
Enabling				
Insurance coverage (0=no 1=yes)				2.09* (1.04-4.18)
Private insurance (0=no 1=yes)				1.45* (1.03-2.04)
Income	low			1.00
	middle			1.06 (0.74-1.52)
	high			1.01 (0.67-1.51)
Predisposing			Pseudo-R^2: 4.70%	Pseudo-R^2: 10.86% R^2 change: 1.96%
Sex (0=male 1=female)			1.61** (1.24-2.09)	1.36** (1.03-1.79)
Age[2]			1.04** (1.03-1.05)	1.03** (1.02-1.04)
Education	low		1.00	1.00
	middle		1.62* (1.12-2.35)	1.68* (1.12-2.50)
	high		1.87** (1.25-2.79)	1.82* (1.15-2.87)
Use propensity	low		1.00	1.00
	middle		0.87 (0.64-1.18)	0.85 (0.61-1.16)
	high		0.94 (0.69-1.27)	0.87 (0.63-1.20)
				Improvement: p=.000
		Pseudo-R^2: 0.30%	Pseudo-R^2: 4.99% R^2 change: 0.29%	Pseudo-R^2: 11.23% R^2 change: 0.37%
Proto-professionalization	low	1.00	1.00	1.00
	middle	0.95 (0.70-1.28)	1.01 (0.73-1.40)	1.02 (0.73-1.43)
	high	1.29 (0.97-1.73)	1.38 (0.98-1.94)	1.48* (1.03-2.12)
		Improvement: p=.069	Improvement: p=.081	Improvement: p=.039

* $p < .05$

** $p < .005$

1 These continuous variables range from 0 (best health) to 100 (worst health). Odds ratios for increases with one unit.

2 Odds ratio for increase with one year

having one or more chronic disorders heightens the odds of consulting a physiotherapist.

5.4 Discussion

The outcomes of this study support our hypotheses that, at the same level of health care need and under the same enabling conditions, people who are more proto-professionalized will a) be more likely to consult a specialist and b) be more likely to consult a physiotherapist. Our hypothesis that the more proto-professionalized people will be less likely to consult a GP was not confirmed.
The need variables are important determinants of use of all three care providers. Enabling conditions also play a significant role; in the case of GPs and specialists the individual's insurance status affects the likelihood of care use, while the odds of physiotherapy use are heightened by a higher income. In accordance with the existing research literature on the Behavioral Model (Andersen, 1995), the need and enabling variables together explain most of the variance in care use. This was to be expected: the use of curative services is first and above all determined by the need for such services and factors that enable use. Our study meets some criticism on the model however, by demonstrating that the predisposing factor 'proto-professionalization' does contribute significantly to the likelihood of specialist and physiotherapy use. The study outcomes illustrate that the concept of proto-professionalization and its operational measure may prove useful in getting a better apprehension of the relative importance of predisposing sociocultural characteristics in predicting and understanding use.
Our analyses showed no differences in GP use with the degree of proto-professionalization. On the other hand, an individual's propensity to use health care for common illnesses contributes significantly to the likelihood of consulting a GP, whereas this predisposing characteristic has no (unequivocal) effect on specialist and physiotherapy use.
The relationship between use propensity and GP use may be explained by the fact that the propensity variable measures an individual's inclination to seek professional help for common everyday illnesses. Having this inclination is a sufficient prerequisite to get access to a GP, for the GP is directly accessible and the patient does not need any additional proto-professional power or skills to gain access. This is different for the consultation of secondary care providers. Patients presenting themselves to a GP with everyday illnesses are not likely referred to a specialist or physiotherapist, since a large part of these signs and symptoms are either self-limiting or could be effectively addressed by self-treatment (Kooiker, 1996). Here, being inclined to seek professional

Table 5.5

Physiotherapy utilization: Odds ratios of predisposing, enabling and need variables for probability of use (n=1851, 95% confidence intervals in parentheses)

		Block 1: protoprof	Block 1: sex, age education, propensity Block 2: protoprof	Block 1: need & enabling var's Block 2: sex, age education, propensity Block 3: protoprof
Need				Pseudo-R^2: 10.17%
General health perception[1]				1.00 [0.99-1.01]
Physical functioning[1]				1.02** [1.01-1.03]
Chronic disorders (0=no 1=yes)				3.35** [2.17-5.17]
Short-term complaints (0=no 1=yes)				1.14 [0.77-1.69]
Enabling				
Insurance coverage (0=no 1=yes)				1.45 [0.60-3.47]
Private insurance (0=no 1=yes)				1.30 [0.80-2.11]
Income	low			1.00
	middle			1.47 [0.84-2.56]
	high			3.32** [1.87-5.90]
Predisposing			Pseudo-R^2: 2.36%	Pseudo-R^2: 10.97% R^2 change: 0.80%
Sex (0=male 1=female)			1.14 [0.82-1.59]	0.93 [0.65-1.33]
Age[2]			1.01* [1.00-1.03]	1.00 [0.98-1.01]
Education	low		1.00	1.00
	middle		1.36 [0.79-2.32]	1.11 [0.62-2.00]
	high		2.07* [1.19-3.61]	1.22 [0.65-2.30]
Use propensity	low		1.00	1.00
	middle		0.62* [0.41-0.94]	0.61* [0.40-0.94]
	high		1.05 [0.72-1.54]	0.99 [0.66-1.48]
				Improvement: p= .166
		Pseudo-R^2: 1.47%	Pseudo-R^2: 3.08% R^2 change: 0.72%	Pseudo-R^2: 11.50% R^2 change: 0.53%
Proto-professionalisation	low	1.00	1.00	1.00
	middle	1.18 [0.76-1.84]	1.12 [0.71-1.77]	1.05 [0.65-1.69]
	high	2.08** [1.39-3.11]	1.79* [1.13-2.84]	1.65* [1.01-2.68]
		Improvement: p=.000	Improvement: p=.016	Improvement: p= .050

* $p < .05$

** $p < .005$

1 These continuous variables range from 0 (best health) to 100 (worst health). Odds ratios for increases with one unit.

2 Odds ratio for increase with one year

help for symptoms is not enough to get a referral to secondary care. For that, the specific 'power' of the proto-professionalized patient is needed. We hypothesized that proto-professionalized people will be *less* likely to consult a GP, based on the assumption that their greater knowledge of health-related matters and stronger sense of control will cause them to be more selective in deciding which (minor) symptoms require the attention of a GP. The proto-professionals' greater knowledge of medical topics and increased control over their health act to promote informed decision making regarding the illnesses that require physician attention. At the same time however, their empowerment and improved decision-making competencies may promote somatization and medicalization (Saltman, 1994; Barsky and Borus, 1995). As Barsky (1988) argues, people's heightened consciousness of health has led to an amplified awareness of bodily symptoms and feelings of illness. Indeed, a Dutch study (Furer and Persoon, 1987) showed that high scores on proto-professionalization were associated with earlier recognition of signs and symptoms. This would mean that, though proto-professionalized people are more selective in the minor complaints they present to the GP, their heightened consciousness of health and reduced tolerance of symptoms may cause them to observe and recognize more signs and symptoms. The net outcome of these differences may be that proto-professionalized people consult a GP just as often as the less proto-professionalized.

In conclusion, this study demonstrated that the concept of proto-professionalization may add to our understanding of the relative importance of an individual's sociocultural background as predisposing factor in the Behavioral Model of Health Services Use. The outcomes are not unambiguous however, and they also raise new questions concerning the role of the sociocultural context in the process of symptom identification and help-seeking behavior. Application of the concept in research on the determinants of use may also add to our understanding of socioeconomic inequalities in care use. Research in Curaçao has shown that, at the same level of health care need, the probability of specialist and physiotherapy use increases with socioeconomic status (see Chapter 3). Numerous international studies have established similar SES differences in services use (Padgett et al., 1994; Newbold, Eyles and Birch, 1995; Van der Meer, Van den Bos and Mackenbach, 1996), and it is widely recognized that, apart from financial and service system barriers to access, (sub)cultural or attitudinal factors are likely responsible for these SES inequalities in use. One of these cultural factors may be the degree of proto-professionalization, which is closely related to socioeconomic status, and in particular educational level (De Swaan, 1979; Geurts and Furer, 1992).
A better understanding of the how's and why's of inequalities in use has obvious policy implications. Although financial and situational

(enabling) variables are more amenable to manipulation than sociocultural factors, equal access to care cannot be guaranteed simply through the removal of financial barriers. Since long it is recognized that policy, which focuses exclusively on enabling variables, with no reference to the sociocultural context, has only marginal impact on behavior (Crandall and Duncan, 1981). Removing situational barriers will have little impact, if 'subjective' and cultural barriers to the use of health services remain.

6 Sociocultural variations in help-seeking behavior for everyday symptoms and chronic disorders[1]

In this chapter, we test the assumption that sociocultural differences in use of health services will only occur below a certain level of illness severity. Subjects' educational level and degree of proto-professionalization are used as indicators of their sociocultural background. Differences in the likelihood of seeking professional care for several common health problems are analyzed, and are compared with the help-seeking behavior for chronic disorders. As hypothesized, higher educated and proto-professionalized people are less likely to seek care for everyday symptoms. In addition, proto-professionalization is accompanied by a greater likelihood of using over the counter medication. Increasing empowerment of patients appears to lead to increased self care for everyday symptoms. When conditions reach a more serious stage, the differences in help-seeking behavior disappear: for most of the chronic conditions studied, the higher educated and more proto-professionalized individuals are just as likely to seek professional treatment as the less advantaged groups. However, there is a difference as to the type of professional consulted for chronic health problems. Proto-professionalized individuals more often receive specialist treatment, probably because they are better equipped to persuade GPs to refer. The adverse side of patient empowerment may be increasing consumerism: a situation in which patient demands, not medical necessity, determine the care delivered.

6.1 Introduction

Symptom identification and illness behavior show large individual differences. Mechanic and Volkart (1960) already argued that a given symptom may be differentially perceived, evaluated and acted upon by different kinds of people. Since the 1960s a vast body of research has accumulated, attempting to link sociocultural variables to individuals' likelihood of perceiving an event as a symptom, and to their mode of responding to symptoms (Freidson, 1961; Suchman, 1966; Zola, 1973; Segall, 1976). Factors that appear to affect this process include health knowledge, cultural background, and sociodemographic characteristics,

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[1] JF Alberts, R Sanderman, I Gerstenbluth, WJA van den Heuvel. Published in: Health Policy 1998; 44: 57-72. Reproduced by permission of Elsevier Science Ireland Ltd.

but many gaps exist in our understanding of the way these factors influence symptom evaluation and management (Burman, 1996).
It is often suggested that the social and cultural background not only determines the choice of illness behavior, but already asserts its influence in the first phase of recognition and identification of symptoms. For example, men and women differ with respect to perceptiveness to symptoms: in general women experience more symptoms (Alonzo, 1979; Verbrugge, 1986). Several studies have shown that (sub)cultural groups vary in the extent to which bodily conditions are perceived as 'normal' or expressed as symptomatic of a state of illness. A study by Zola (1973) among Anglo-Saxon Protestants, and Irish and Italian Catholics, demonstrated that the three cultural groups differed distinctly as regards their attentiveness to and tolerance for similar symptoms. Segall (1976) found that Jewish patients displayed a greater willingness to adopt the sick role, whereas Anglo-Saxons were more inclined to ignore symptoms. Some more recent studies suggest that the heightened consciousness of health among the higher educated and 'proto-professionalized' people has led to an amplified awareness of bodily symptoms and feelings of illness (De Swaan, 1981; Barsky, 1988). Indeed, there is some empirical evidence that proto-professionalization of patients (the process in which lay people adopt insights, beliefs, and the accompanying behavioral standards from the profession of medicine) is associated with earlier recognition and identification of minor signs and symptoms (Furer and Persoon, 1987).
The next stage in the process of symptom evaluation and management is the decision whether or not to seek a suitable remedy or (professional) help. According to Andersen's Behavioral Model of Health Services Use (Andersen and Newman, 1973; Aday and Andersen, 1974), the *need* for health care (in this case: perceived symptoms) is the primary factor in determining use of services. The social and cultural background of the individual (the *predisposing factors* in the Andersen model) and *enabling factors*, such as financial and community resources, are of secondary importance. Hulka and Wheat (1985) note that evidence exists for a dose-response relationship between need and use: the stronger the need (i.e., the more severe the perceived symptoms), the more important it is in determining health services use.
This finding is in keeping with Mechanic's (1962) concept of illness danger, and Rosenstock's (1966) notion that an individual's readiness to act is defined by his or her perceived susceptibility and the perceived seriousness of the condition. The extent to which an individual is free to decide whether to consult a professional, will first be determined by the urgency and perceived danger of the health problem and the nature of the condition. As illness severity increases, opinions regarding urgency of action converge, and the likelihood that people will indulge in no care, self care or delay seeking professional care lessens (Veitch, 1995a; 1995b).

Following this line of reasoning one could hypothesize that, as need decreases, the importance of predisposing (sociocultural) variables in determining use increases. Indeed research suggests that sociocultural differences in help-seeking behavior seem greatest for illnesses that are common, predictable, and probably non-dangerous. Lower education and older age are associated with a stronger propensity to seek professional care for everyday symptoms and common illnesses (Sharp, Ross and Cockerham, 1983; Kooiker, 1996). Higher educated persons, people with more medical knowledge, and younger individuals are more inclined to alleviate minor complaints without seeking professional help: they more often engage in self care and use over the counter (OTC) medicines for minor symptoms (Segall and Goldstein, 1989; Central Bureau of Statistics, 1995; Van der Meer, Van den Bos and Mackenbach, 1996). People with a higher education are more skeptical about the necessity of medical care for everyday symptoms. They are more likely to manifest behavior favorable toward self-control and acceptance of personal responsibility and have attitudes similar to those of health care professionals in this respect (Cockerham et al., 1986a; Kooiker, 1996). Accordingly, a Dutch study (Furer and Persoon, 1987) showed that, whereas the likelihood of experiencing everyday symptoms increased with proto-professionalization, the likelihood of seeking professional help for those symptoms *decreased* with proto-professionalization.

So, on the one hand there is a vast literature on the importance of sociocultural factors in explaining illness perception and help-seeking behavior, and on the other hand there is empirical evidence that 'need' is the most important determinant of health services use, and that individual differences in use are greatest when the need is less prominent (i.e., when symptoms are less severe). However, hardly any research has been done that compares the contribution of sociocultural factors to health services use for symptoms of different severity, or that establishes at which level of illness severity these factors stop contributing.
In this study we examine to what extent sociocultural differences in help-seeking behavior vary with the severity of the symptoms under study. The subjects' educational level and degree of proto-professionalization are used as indicators of their sociocultural background. Both indicators represent the sociocultural component of an individual's socioeconomic status. Level of education is the strongest predictor of socioeconomic health inequalities (Ranchor, Sanderman and Van den Heuvel, 1990; Van der Lucht, 1992; see also Chapter 3). Proto-professionalization is related to education, and can be regarded as a consecutive aspect of socioeconomic status (Tax, Furer and König-Zahn, 1990). The concept of proto-professionalization was introduced by De Swaan (1979) and refers to the degree of compatibility of the lay culture with modern medicine. De Swaan's theory is grounded in the work of Suchman (1966) and

Freidson (1970) who demonstrated that the social structure (parochial versus cosmopolitan) and the individual's health orientation or 'lay culture' (popular versus scientific) influence their use of health services. The theory of proto-professionalization also draws from the work of Kadushin (1966) who suggests that persons belong to different social circles that encourage attitudes and orientations supportive of a particular type of care. In the process of proto-professionalization lay people adopt insights, values and the accompanying behavioral standards of the profession of medicine (De Swaan, 1979; 1981). Proto-professionalized people can be characterized as follows: they are socially near to circles of health professionals, be it through informal contacts or through work, they are the first to adopt concepts and insights (knowledge) from the profession, and they have a high sense of control, i.e., they have confidence in their own diagnosis and their own judgement of the quality of the treatment they receive.

Based on the research literature, we expect to find that sociocultural variations in help-seeking behavior for symptoms will only occur below a certain level of illness severity. Adults experience a variety of minor health problems on a regular basis. Some of the most prevalent problems are musculoskeletal and respiratory symptoms, and emotional distress (Verbrugge, 1986; Alberts et al., 1996). We analyze differences in the likelihood of seeking professional care for some of these common health problems. We then compare these with the differences in help-seeking behavior for some prevalent chronic health problems. The following hypotheses are formulated:

1.a Higher educated and more proto-professionalized individuals are less likely to seek professional help for their everyday symptoms.

1.b Their lower likelihood of seeking professional help for minor symptoms is expressed in a greater likelihood of taking OTC medicines for these symptoms.

Given the more serious nature of the selected chronic health problems, we expect to find no effect of education or proto-professionalization on the likelihood of seeking professional help for these problems:

2.a Higher educated and more proto-professionalized people are just as likely to seek professional help for their chronic health problems as the lower educated and less proto-professionalized.

There may, however, be a difference as to the type of professional consulted. In general, professionalization of patients appears to heighten the chance of being referred to specialist physicians, probably because of their empowerment and better communication skills (see Chapter 5). So, although we expect to find no differences in the likelihood of seeking professional help for specific chronic disorders:

2.b patients who are more proto-professionalized will be more likely to receive treatment from a specialist physician for their chronic disorders.

6.2 Method

Study population

The present study was done in Curaçao, a Caribbean island with a population of 144.000, located some 30 miles off the Venezuelan coast. Curaçao is one of the five islands of the Netherlands Antilles, which form part of the Kingdom of the Netherlands. Since most of the literature reviewed refers to more westernized countries, one might question whether the underlying theoretical notions are equally applicable to this study population. Indeed, on a general level Curaçao's culture differs from the American and European cultures in many respects. However, this study focuses on a sociocultural gradient in health services use (operationalized by levels of education and proto-professionalization) *within* one community or culture. There is no reason to assume that the mechanisms through which education and proto-professionalization affect health services use in Curaçao differ from those in more westernized countries, since the professional orientations of the proto-professionalized are dictated by modern western medicine. Unarguably, properties of the Caribbean lay culture are important in shaping the lay orientations of this study population. Hence, culture-specific lay orientations were taken into account in the construction of the instrument for measuring proto-professionalization.
The Curaçao health care system is largely modeled after the Dutch care system, and most health care providers receive their vocational training in the Netherlands. The general practitioner (GP) is the 'gatekeeper': usually, the first contact people have with health care is through the GP. Officially, secondary care is only accessible upon referral by a GP. The general patterns of services use are largely similar to utilization patterns in the Netherlands (Alberts et al., 1996; see also Chapter 2).
Data are derived from the Curaçao Health Study, a health interview survey among the non-institutionalized population aged 18 years and older. The survey was conducted in 1994 and concerned people's health status, their lifestyles, and use of health services. A randomly selected sample was drawn from the Registry Office. In total 2248 individuals were surveyed in face-to-face interviews by trained interviewers. The response rate, after excluding those who did not meet the inclusion criteria, was 85.3%.
To determine the representativity of the study sample, some demographic characteristics were compared with those of the non-

institutionalized population of 18 years and older (Central Bureau of Statistics, 1993). As for geographical distribution and mean age, the study sample represents the population. The mean age of the study participants is 43.7 (range: 18-99 years). The sample consists of 57.2% women (95% CI: 55.0-59.2), which means that they are slightly over represented, for women make up 54.6% of the adult population. Full details of the study design and sampling procedure are reported elsewhere (Alberts et al., 1996).

Instruments

Since the method of health interview surveys was originally developed in Western Europe and North America, it was essential that the survey method be thoroughly piloted in this multi-ethnic multilingual Caribbean community. Therefore, preceding the Curaçao Health Study an extensive pilot study was done to test the organizational and infrastructural feasibility of a health interview survey, to test the cross-cultural validity of the instruments, and to test the semantic and conceptual equivalence of the original Dutch questionnaire and the translated Papiamentu, English, and Spanish versions. The pilot study demonstrated that, with some necessary adaptions, the survey yielded reliable and valid data (Alberts et al., 1993).
In this study the following instruments were used:
Chronic disorders - The participants were presented with a list of 33 chronic conditions (Gerstenbluth et al., 1996). For each disorder the subjects were asked whether they had suffered from it in the 12 months preceding the interview, and if so whether they had taken any medicines for it, and whether they had consulted a professional for this disease in the reference period. For the present study, the five most prevalent disorders were selected from the checklist, i.e., hypertension (14.5%), dizziness (10.8%), hernia and other chronic back problems (10.1%), psychological problems (9.6%), and migraine and chronic headaches (7.1%).
Everyday symptoms - Subjects were asked about the presence of 22 symptoms covering most body systems in the preceding 14 days (Marmot et al., 1991). Again, positive responses to items were followed by questions on use of medication and consultation of professionals. The five most prevalent symptoms selected for this study are: coughing (20.0%), headaches (17.8%), a cold or 'the flu' (17.0%), backache (13.6%), and emotional distress (11.8%).
Educational level - Three groups were formed based on the participants' highest level of education, including both regular education and other vocational training or courses, i.e., 'low' (no education, primary school),

'middle' (lower secondary education), and 'high' (higher secondary education, higher vocational education, academic education).
Proto-professionalization - An index of proto-professionalization was constructed from the separate indicators: social nearness to professionals, health-related knowledge, and health locus of control. The number of professions (range 0-10) which are represented in the subjects' social network was used as a proxy for their social nearness to circles of professionals. Only professionals with whom the subject has regular contact were included. The individual's knowledge of health-related matters was measured with two lists of true/false statements, one covering knowledge of health behavior, the other covering knowledge of existing health services. For each list, a sum score was calculated by counting the number of correct answers. To measure an external health locus of control, short forms of the external dimensions (chance orientation and doctor orientation) of the Multidimensional Health Locus of Control Scale were used (Wallston, Wallston and DeVellis, 1978). Since this study is done in a Caribbean community, which is more accepting of the supernatural and mystic experiences (Arrindell, Van Faassen and Pereira, 1985; Morley, Wykes and MacCarthy, 1991; Wouters, 1992), a third dimension was added to the scale, i.e., external magic orientation or the degree to which a person attributes health problems or illness to the negative influence of powerful others. Research has shown that this dimension has good reliability ($\alpha = .75$) and an adequate construct validity (Alberts et al., 1993). Sum scores were calculated for each of the 4-item locus of control dimensions. Higher scores indicate a lesser orientation toward chance, doctors and/or magic.
Using Principal Component Analysis on the six composite measures we extracted one unrotated factor (Eigenvalue 2.46, 40.9% variance explained), and computed a factor score for each participant. A higher factor score points to more professionals in one's social network, more knowledge of health-related matters, and a stronger sense of control (i.e., lower external orientations). The reliability of the overall construct is satisfactory (Cronbach's α computed from the six scales is .69). Furthermore, validation analysis has shown that the instrument has good psychometric properties and that it can replicate sociodemographic variations in proto-professionalization found in Dutch populations. For the logistic regression analysis the proto-professionalization variable was transformed into a contrast variable by creating three percentile groups with 'low', 'middle' and 'high' scores.

Table 6.1
Prevalences of the selected everyday symptoms and chronic disorders per 100 cases, by level of education and proto-professionalization

		Education (n=2244)	Proto-professionalization (n=2206)
Everyday symptoms			
Coughing	low	21.0	21.5
	middle	19.2	20.9
	high	19.9	17.3
Emotional distress	low	10.2	11.4
	middle	11.9	12.5
	high	12.6	10.9
A cold/the flu	low	12.7	16.3
	middle	16.6	17.5
	high	20.7 (p=.000)	17.3
Backache	low	14.4	15.9
	middle	13.6	13.2
	high	13.0	12.1
Headache	low	14.0	16.5
	middle	16.6	15.8
	high	21.8 (p=.001)	21.5 (p=.007)
Chronic disorders			
Hypertension	low	24.4	18.6
	middle	11.0	13.9
	high	10.9 (p=.000)	11.0 (p=.000)
Hernia & chronic back problems	low	12.5	11.8
	middle	9.6	9.9
	high	8.8	8.6
Dizziness	low	13.5	15.8
	middle	12.3	9.6
	high	6.8 (p=.000)	7.3 (p=.000)
Migraine & chronic headache	low	4.0	5.4
	middle	7.8	6.9
	high	8.5 (p=.003)	9.1
Psychological problems	low	10.4	11.6
	middle	10.8	10.1
	high	7.6	7.2

6.3 Results

Before going into the main analysis, the prevalences of the selected symptoms and disorders are described by level of education and proto-professionalization (Table 6.1). Of the everyday symptoms, colds and headaches are more often reported among the higher educated groups. Headaches are also more prevalent among highly proto-professionalized people. The other everyday symptoms are evenly spread among the groups. The prevalences of the selected chronic disorders show an inverse pattern: hypertension and dizziness are more prevalent among the lower educated and less proto-professionalized. The other chronic disorders show a similar, though non-significant association, except for chronic headaches: these are more prevalent among the higher educated.
Table 6.2 shows the odds ratios of consulting a health care professional for the selected everyday symptoms. The effects of education and proto-professionalization were analyzed, adjusted for the possible confounders sex and age. In agreement with hypothesis 1.a, the higher educated and more proto-professionalized individuals are less likely to seek professional help for several everyday symptoms: a higher educational

Table 6.2
Consulting a health care professional for everyday symptoms: ORs for level of education and proto-professionalization, adjusted for sex and age (95% confidence intervals in parentheses)

Everyday symptoms		Education		Proto-professionalization	
Coughing	low	1.00		1.00	
(n=446)	middle	0.81	[0.44-1.49]	1.18	[0.70-2.01]
	high	0.56	[0.29-1.07]	0.81	[0.45-1.45]
Emotional distress	low	1.00		1.00	
(n=262)	middle	0.96	[0.40-2.27]	0.61	[0.28-1.31]
	high	0.95	[0.37-2.44]	0.36*	[0.15-0.86]
A cold/the flu	low	1.00		1.00	
(n=381)	middle	0.67	[0.34-1.32]	1.23	[0.70-2.18]
	high	0.41*	[0.20-0.84]	0.62	[0.34-1.15]
Backache	low	1.00		1.00	
(n=305)	middle	0.70	[0.34-1.45]	0.58	[0.32-1.06]
	high	0.79	[0.38-1.63]	0.45*	[0.24-0.86]
Headache	low	1.00		1.00	
(n=395)	middle	0.55	[0.28-1.13]	1.16	[0.65-2.10]
	high	0.44*	[0.21-0.89]	0.65	[0.36-1.18]

* $p < .05$

level significantly decreases the odds of seeking help for a cold or a headache. A higher degree of proto-professionalization lowers the likelihood of seeking help for emotional distress or a backache.
The lower likelihood of the more advantaged groups to seek help for everyday symptoms may be reflected in a stronger inclination to apply self care. The odds of taking OTC medicines for the various everyday symptoms show that proto-professionalized individuals are more likely to take OTC medicines for coughing and colds (Table 6.3). The effects of education follow the same pattern, but the odds ratios do not reach statistical significance. Hypothesis 1.b therefore is confirmed as applies to proto-professionalization.
For the more serious chronic disorders no differences should be found in the likelihood of consulting a professional, and indeed there are no significant differences in seeking help for most disorders (Table 6.4): hypothesis 2.a is largely confirmed. However, of the people reporting to suffer from dizziness, the highest educated are seven times more likely to consult a professional than the lowest educated. Proto-professionalization appears to affect the odds of being under treatment for hypertension,

Table 6.3
Taking OTC medicines for everyday symptoms: ORs for level of education and proto-professionalization, adjusted for sex and age (95% confidence intervals in parentheses)

Everyday symptoms		Education		Proto-professionalization	
Coughing	low	1.00		1.00	
(n=446)	middle	1.15	[0.46-2.85]	1.08	[0.49-2.36]
	high	2.12	[0.89-5.06]	2.17*	[1.04-4.55]
Emotional distress	low	1.00		1.00	
(n=262)	middle	1.70	[0.27-10.90]	0.75	[0.12-4.85]
	high	1.60	[0.22-11.93]	1.64	[0.34-7.82]
A cold/the flu	low	1.00		1.00	
(n=381)	middle	1.14	[0.45-2.86]	0.94	[0.43-2.06]
	high	1.95	[0.78-4.89]	2.01*	[1.02-3.97]
Backache	low	1.00		1.00	
(n=305)	middle	0.95	[0.28-3.21]	1.29	[0.44-3.78]
	high	0.62	[0.16-2.44]	0.94	[0.29-3.05]
Headache	low	1.00		1.00	
(n=395)	middle	1.12	[0.48-2.60]	0.96	[0.50-1.85]
	high	1.96	[0.87-4.44]	1.24	[0.68-2.24]

* $p < .05$

with the middle group being less likely to seek help than the lowest and highest group.
Finally, it was hypothesized that patients who are more proto-professionalized are more likely to receive specialist treatment for their chronic disorders. Table 6.5 shows the odds ratios of receiving treatment from a GP and from a specialist physician for each of the chronic disorders. A high degree of proto-professionalization heightens the odds of receiving specialist treatment for hypertension and dizziness. The individual's educational level tends to have a similar effect, but does not contribute significantly to the likelihood of specialist treatment for these two disorders. Proto-professionalization does not affect the likelihood of consulting a GP for any of the chronic disorders, except hypertension: the lower likelihood of the middle group to consult a professional for this disorder appears specifically to apply to GP consultations. Education significantly affects the odds of consulting a GP for dizziness: the highest educational group is three times more likely to see a GP for this disorder than the group with the lowest education.

Table 6.4
Consulting a health care professional for chronic disorders: ORs for level of education and proto-professionalization, adjusted for sex and age (95% confidence intervals in parentheses)

Chronic disorders		Education		Proto-professionalization	
Hypertension	low	1.00		1.00	
(n=324)	middle	1.56	[0.52-4.67]	0.32*	[0.13-0.77]
	high	0.73	[0.26-2.03]	1.00	[0.32-3.13]
Hernia &	low	1.00		1.00	
chronic back problems	middle	1.92	[0.85-4.33]	1.42	[0.72-2.83]
(n=226)	high	2.08	[0.88-4.90]	0.88	[0.44-1.75]
Dizziness	low	1.00		1.00	
(n=241)	middle	2.65*	[1.21-5.79]	0.98	[0.52-1.85]
	high	7.05**	[2.60-19.08]	1.73	[0.82-3.67]
Migraine &	low	1.00		1.00	
chronic headache	middle	2.30	[0.70-7.54]	1.07	[0.44-2.61]
(n=158)	high	0.53	[0.15-1.82]	0.81	[0.35-1.89]
Psychological problems	low	1.00		1.00	
(n=286)	middle	1.65	[0.77-3.51]	1.16	[0.59-2.28]
	high	1.14	[0.49-2.64]	0.93	[0.45-1.93]

* $p < .05$
** $p < .005$

6.4 Discussion

The formulated hypotheses are largely confirmed by the outcomes of this study. These results support the underlying assumption that sociocultural variations in seeking professional help will only occur below a certain level of illness severity. Higher educated and more proto-professionalized people are less likely to seek professional help for everyday symptoms such as colds, headaches, backaches and emotional distress. In addition, proto-professionalization is accompanied by a greater likelihood of using OTC medicines for coughing and colds. The improved abilities of the higher educated and more proto-professionalized to exercise appropriate control over their health, appear to have led to increased self care and improved decision-making about which symptoms require professional attention. The lower educated, less proto-professionalized patients may show 'over consumption' in primary health care. They appear to be attracted to the traditional model of medical care, which is characterized by a dependent relationship of patients with their doctors (Lloyd, Lupton and Donaldson, 1991; Blenkinsopp and Bradley, 1996).

Table 6.5
Type of professional consulted for chronic disorders: ORs for level of education and proto-professionalization, adjusted for sex and age (95% confidence intervals in parentheses)

		GP				Specialist			
Chronic disorders		Education		Protoprof		Education		Protoprof	
Hypertension	low	1.00		1.00		1.00		1.00	
(n=324)	middle	1.26	(0.63-2.51)	0.50*	(0.28-0.88)	1.12	(0.54-2.29)	1.71	(0.93-3.17)
	high	0.59	(0.29-1.20)	0.80	(0.41-1.54)	1.93	(0.90-4.13)	1.97*	(1.01-3.91)
Hernia & chron	low	1.00		1.00		1.00		1.00	
back problems	middle	1.00	(0.48-2.08)	1.15	(0.61-2.14)	1.12	(0.46-2.73)	1.16	(0.55-2.48)
(n=226)	high	1.08	(0.49-2.35)	0.89	(0.46-1.72)	1.23	(0.48-3.14)	1.11	(0.50-2.48)
Dizziness	low	1.00		1.00		1.00		1.00	
(n=241)	middle	2.11*	(1.02-4.38)	0.83	(0.45-1.54)	1.03	(0.33-3.29)	0.97	(0.35-2.69)
	high	3.00*	(1.27-7.07)	0.99	(0.50-1.95)	2.44	(0.74-8.05)	2.71*	(1.02-7.15)
Migraine & chron	low	1.00		1.00		1.00		1.00	
headache	middle	1.52	(0.49-4.70)	1.26	(0.53-3.00)	1.56	(0.37-6.57)	0.32	(0.08-1.34)
(n=158)	high	0.38	(0.11-1.27)	0.68	(0.30-1.57)	1.03	(0.19-5.42)	0.98	(0.33-2.96)
Psychological	low	1.00		1.00		1.00		1.00	
problems	middle	2.03	(0.94-4.36)	1.35	(0.68-2.68)	0.48	(0.16-1.44)	1.64	(0.53-5.07)
(n=286)	high	2.04	(0.86-4.87)	1.32	(0.63-2.74)	0.68	(0.18-2.44)	1.50	(0.44-5.12)

* $p < .05$

We also found some empirical support for the notion that the heightened consciousness of health among the higher educated more proto-professionalized people leads to a reduced tolerance for minor symptoms (De Swaan, 1981; Barsky, 1988): they report higher prevalences of colds and headaches.
An explanation of these sociocultural differences in perceptiveness to minor symptoms and in subsequent help-seeking behavior can be found in the more qualitative research literature on lay concepts of health, for example in the studies by Blaxter (1983; 1997), Cornwell (1984), and D'Houtaud and Field (1984). The picture that consistently emerges from these studies is that people of lower SES have a comparatively stoical, puritanical view of the occurrence of illness. Although sometimes labeled as 'fatalistic', their views are quite realistic since illness is often inevitable in their circumstances. Typically, the causes of illness are attributed to external factors (infections, working conditions) and self-responsibility is often explicitly denied. The perspective of health expressed is a utilitarian one: health is the ability to work. Illness represents a threat to the duty of work, so the moral requirement is to resist illness and not give in to it. Being overly preoccupied with health is morally incorrect and illnesses will only be mentioned if they are understood to be 'real'. Once fallen ill, proving that the illness is real by seeking legitimation from a doctor is important. Given these lay concepts of health described in the reviewed literature, it is quite understandable that lower educated, less proto-professionalized individuals may report fewer everyday illnesses, but are more likely to seek professional help for their symptoms.

Individuals of higher SES, by contrast, tend to emphasize a personalized view of health as a realization of self. Health is seen as a personal value to be sought and cultivated for one's own benefit (D'Houtaud and Field, 1984; Blaxter, 1997). Barsky's (1988) 'paradox of health' seems applicable here: the improvement of the collective health of the nation is accompanied by a decline in people's tolerance for minor disorders, along with a greater inclination to view uncomfortable symptoms as signs of disease. The increasing health-related knowledge of the more advantaged groups, and the increasing value placed upon 'good health' appears to have raised the standards used for judging health, so that people are more disturbed by symptoms that were previously deemed less important. Hence, the higher educated and more proto-professionalized groups will more readily report signs and symptoms. However, at the same time the professional views on the causal relationship between lifestyle and health, and the health promotion lessons on self-responsibility for health are widely accepted within these groups, so they will first turn to self care before seeking professional help for everyday illnesses.

When conditions reach a more serious stage, the sociocultural differences in help-seeking behavior disappear: for most of the chronic conditions studied, the higher educated and more proto-professionalized individuals are just as likely to seek professional treatment as the less advantaged groups. The study outcomes confirm that, as need increases, the significance of predisposing factors in determining services use, diminishes. However, whether a person seeking professional treatment is referred to a specialist physician is not only determined by the severity of the illness. Proto-professionalized individuals more often receive specialist treatment for hypertension and dizziness, probably because they are better equipped to communicate with GPs and to persuade them to refer. Similar results were found by Van der Meer and colleagues (Van der Meer, Van den Bos and Mackenbach, 1996) who observed that higher educated patients who believed themselves to be better off with a specialist could press the GP to refer, even when the complaint could be perfectly dealt with by the GP. These results may indicate that the cultural similarities and the narrowed 'competence gap' between the professional and the proto-professionalized patient have led to a more egalitarian relationship in which the patient has adapted a consumer orientation (Haug and Lavin, 1981; Haug, 1988; Cockerham et al., 1986b; Wolinsky, 1988). As Haug and Lavin (1981) posit, a consumer orientation focuses on purchasers' (patients') rights and providers' (physicians') obligations, rather than on physicians' rights (to direct) and patients' obligations (to follow directions). The physician-patient interaction may be based more on bargaining than on a professional dominance perspective (Wolinsky, 1988). Involving the patient in decision-making, though widely advocated, can have negative aspects since the patient may press for unnecessary specialist referrals. For hypertension this is indeed the case: hypertensives who have to stay under physician supervision do not necessarily need to see a specialist. Usually the GP can properly provide for these repeat consultations. So, proto-professionalized patients may 'over consume' specialist care.

In the case of dizziness there may be some other underlying explanation: this is the only chronic condition for which higher educated patients are more likely to seek professional help than the lower educated. This may be explained by the fact that 'dizziness' is a popular lay diagnosis in Curaçao. Patients use it as a generic term for a multitude of complaints, some of which may be more serious than others. Higher educated people will be less inclined to rely on such a lay diagnosis; they tend to interpret their bodily states in accordance with modern medical conceptions of disease and illness, and will label their symptoms accordingly. The fact that we found that dizziness is less prevalent among the higher educated

and proto-professionalized supports this explanation[2]. However, once a higher educated individual does experience dizziness, he or she will probably interpret it as a danger signal of some serious underlying cause, and will consult a professional.

The results of this study underscore the importance of taking into account the nature and severity of health problems when studying sociocultural variations in health care use. Increasing public knowledge of medical topics has led to the emergence of patients who actively make decisions regarding health care options. This is expressed in a lesser inclination to seek professional care for minor symptoms that are either self-limiting or can be effectively addressed by self care. From a health policy perspective this is a desirable development, and yet another argument in favor of enhancing patient empowerment. However, there is another side to the coin: once these patients do enter the health care system, their increased empowerment leads to increased use of costly specialized care. Part of these consultations could very well be substituted by the less costly, primary care provided by GPs. So, the adverse side of patient empowerment is rising consumerism: a situation in which patient demands, not medical necessity, determine the care delivered (Lloyd, Lupton and Donaldson, 1991). The resulting 'over use' of diagnostic and therapeutic resources does not only raise the costs of health care, it can also bring about undesirable side effects of unnecessary treatment (Kooiker, 1996).
Where the line on consumerism should be drawn, is a question that can not readily be answered, since it is partly an ideological issue. For example, health policy in the Netherlands is quite strongly opposed to consumerist tendencies (Dutch Health Council, 1991), whereas in the USA consumerism is considered more to be an acquired right of patients (Cockerham et al., 1986b). Which tools does policy have to restrict consumerism? Strategies aimed at bringing about change through sociocultural variables will probably not be very succesful: the trend toward patient empowerment can not be reversed. On the other hand, patients can not be expected to be their own judge when it comes to determining the medical necessity of treatment options. Physicians may be very aware of the undesirable effects of consumerism on their treatment and referral practices, but when patients exert their power by threatening to take their business elsewhere, the physician's professional standards probably lose out.

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[2] There may also be a more objective 'real' reason for the higher prevalence of dizziness among the lower educated. Dizziness is a typical symptom of anemia. Iron-deficiency anemia, caused by nutritional deficiencies is more prevalent among the lower SES (LeBlanc et al., 1995). Also for anemia-related dizziness extensive (specialist) treatment is not necessary.

Tools to restrict consumerism can rather be found in the modification of financial and system barriers to care, for example by defining the type and quantity of care that is covered by insurance plans, and by restricting the supply of services and facilities.

7 Summary and discussion

This final chapter starts with a short recap of the background and objectives of the thesis in section 7.1, and a summary of the main study outcomes in section 7.2. The results suggest that one conceptual model is not sufficient in explaining sociocultural differences in services utilization. Therefore, section 7.3 elaborates on the necessity of applying different explanatory models, depending on the purpose of care utilization and type of service under study. Section 7.4 is dedicated to a discussion of the value of the concept of proto-professionalization. The next two sections deal with methodological aspects of the present study and with implications for further research. Lastly, in section 7.7 the policy recommendations that follow from this study are discussed.

7.1 Background and objectives

An important issue for health care reform is the equitable distribution of health services. Equity means that people's needs, rather than social privileges, guide the distribution of opportunities for health care. In virtually every country in the world, differences in socioeconomic status, gender and age reflect differences in social privilege that clearly influence chances for health and well-being (WHO, 1996).

The principal, policy driven, aim of this study is to understand differential access to health care in Curaçao and to suggest ways to achieve equity of access. To accomplish this, research should not only identify the various factors that influence health services use, but should also place these variables within a testable theoretical context and explain their interrelations. Accordingly, the theoretical objective of this study is to explain differences in health services utilization and differential use of care for similar health problems from a sociocultural perspective. 'Health services utilization' comprises a broad range of behaviors. The present study focuses on curative care utilization, that is, use of health services for diagnosis and treatment.

Andersen's Behavioral Model of Health Services Use (Andersen and Newman, 1973; Aday and Andersen, 1974) is used to guide the ordering of the determinants of services utilization. In this model, the explanatory variables are not grouped according to their conceptual similarity, but according to the way they affect utilization. The model considers the use of health services to be a function of predisposing, enabling and need characteristics of an individual.

A person's *predisposition* to use health services can be predicted by individual characteristics that exist prior to the onset of specific episodes

of illness. Such characteristics comprise demographic, social-structural, and attitudinal-belief variables. The *enabling* variables in the model refer to conditions that facilitate or impede the use of services. Even though individuals may be predisposed to use health services, some resources must be available for them to do so. Enabling conditions can be measured by financial resources (e.g., income, health insurance) and system resources, such as professional-to-population ratios. The *need* variables represent the most immediate cause of health services use. Need is usually measured by self-reports of symptoms and diagnoses, functional limitations (disabilities), and/or perceived health status.
This study concentrates on the predisposing variables in the Andersen model, specifically on the individual's sociocultural background. The sociocultural background underlies knowledge, attitudes and beliefs on the subject of health, and provides a context for the individual's identification and perception of illness and subsequent help-seeking behavior.

A suitable conceptual framework for the analysis of sociocultural differences in health-related behavior was found in De Swaan's (1979,1981) theory on proto-professionalization. The concept is grounded in the work of Suchman (1966) and Freidson (1970), and refers to the degree of compatibility of the lay culture with modern medicine. Proto-professionalization is the process of proliferation of professional knowledge and attitudes into the lay culture. The process is implicit in terms such as 'juridicalization', 'psychologization' or 'medicalization' of daily life. Many concepts and views with which people in modern societies operate are the proto-professional counterparts of professional concepts. For example, the standards of hygiene that people keep, the importance they attach to physical exercise, and the way they prepare their meals are all partly dictated by views held within the medical profession.
The main characteristics of proto-professionalized people are that they are socially near to the profession, be it through informal contacts or through work, and that they are the first to adopt concepts, insights and behavioral standards from the profession. Individuals who are high in medical proto-professionalization are those with more accurate knowledge of the influence of behavior on health, who have greater knowledge of the organization of health services and a strong sense of control over health outcomes, and who move in social networks where they have frequent contact with health professionals. So, the three elements 'network', 'knowledge' and 'control' together constitute the attribute of proto-professionalization, and this attribute influences an individual's predisposition to use health services.

Apart from proto-professionalization, this study also analyzes the effects of the more 'usual' predisposing factors in the Andersen model, i.e., sociodemographic variables (sex, age) and socioeconomic status (level of education). Enabling and need characteristics are included as control variables. The study does not focus on the effects of enabling factors on care utilization: there is no doubt that financial and system resources are essential in attaining access to health care. The effects of the need variables are discussed in more detail, since the extent to which an individual is free to decide whether or not to consult a professional will firstly be determined by the urgency and perceived severity of the health problem. Other determinants of health services use will exert stronger influence -or will only start to have influence- when there is no immediate urgency to call upon medical care. Therefore, this study also examines how the effects of sociocultural variables on health services use differ with varying need.

7.2 Summary

General patterns of use

To form a notion of the relative magnitude of health services utilization in Curaçao, patterns of use were compared with those in the Netherlands. Dutch reference data were chosen because of the strong political and historical ties between Curaçao and the Netherlands. Most care providers in Curaçao have received their vocational training in the Netherlands. Also, in many aspects the health care systems in Curaçao and the Netherlands are comparable. For example, in both systems the GP functions as gatekeeper to secondary care.
In general, the incidence and volume of use of GPs, specialists, and hospitals in Curaçao is quite similar to that in the Netherlands. This similarity is remarkable, all the more because until now the prevailing belief among health care professionals was that health care utilization in Curaçao is very high, supposedly because of a well-nurtured culture of medical shopping. The results of this study indicate that, when taking the Netherlands as reference, the use of GPs, specialists and hospitals is not disproportionally high. The use of dentists and physiotherapists is remarkably less common in Curaçao compared to the Netherlands. It goes without saying that, on the basis of these comparisons, it is not possible to draw any conclusions concerning the desirable absolute level of use.

Use by sex, age, and education

Variations in the incidence and volume of use of each of the health services mentioned were analyzed by sex, age, and educational level. We found significant inequalities in the *incidence* of services utilization, but the *volume* of use is hardly associated with individual characteristics. These outcomes support the notion of Andersen and Newman (1973) that supply factors, such as characteristics of the physician, may be more decisive in determining volume of use than patient characteristics. Once a patient has entered the health care system, the extent to which he or she makes use of services may be mainly determined by the providers of care. With respect to the incidence of services utilization the following sociodemographic and socioeconomic differences were found:
GP utilization - In contrast with findings from the Netherlands, the incidence of GP utilization in Curaçao is fairly evenly spread among the sociodemographic groups distinguished; women make more extensive use of GPs than men, but there are no significant relationships with age or educational level. In view of the fact that in general aging is accompanied by a higher need for medical care, it is striking that older people in Curaçao do not make more use of the services of GPs than younger individuals. Considering the existing socioeconomic inequalities in health (Alberts et al., 1996), the absence of any relationship between educational level and GP utilization in our study is also remarkable.
Specialist and hospital utilization - Contrary to the use of GPs, the incidence of specialist utilization is clearly related to sex, age and education: women, older people, and individuals with higher levels of education are more likely to consult specialists. The incidence of hospitalization shows more or less the same pattern: being older and having a higher education heightens the likelihood of being hospitalized. The socioeconomic inequities in specialist and hospital utilization not only come to light when the mediating effects of inequalities in need (health) are taken into account, but also before adjustment for health inequalities. In other words: there appears to be horizontal inequity (i.e., similar needs for care are not reflected in similar levels of use) as well as vertical inequity (i.e., those with the least need show the greatest use).
Dentist and physiotherapy utilization - The relationship between dentist utilization and age shows an inverted u-shape: younger adults are more likely to see a dentist than older people, but in the youngest age group (18-24 years) the likelihood of seeing a dentist decreases again. The relationship between age and physiotherapy utilization shows a similar, though non-significant pattern. The access to dentists and physiotherapists also appears to be both vertically and horizontally inequitable with respect to education.

In conclusion, sociodemographic and socioeconomic inequalities were found in access to medical specialists, hospitals, dentists and physiotherapists.

Effects of proto-professionalization

Having established these inequalities in access to care with respect to the more 'usual' predisposing variables in the Andersen model, the next step in the analyses was to introduce proto-professionalization as predisposing variable. To this end, we constructed and validated an index of proto-professionalization encompassing social network structure, health-related knowledge and locus of control.
The instrument appears to have good psychometric properties, and it can replicate sociodemographic variations in proto-professionalization found in prior studies (Furer and Persoon, 1987; Geurts and Furer, 1992). The relationship between proto-professionalization and age shows an inverted u-shape: proto-professionalization is highest in the group aged 25-44, and decreases with rising age. Also the youngest age group of 18 to 24 years - the group that is still in the 'learning phase'- shows a lower mean score. With respect to SES, the highest scores on proto-professionalization are found among the higher educated. The latter finding is in keeping with the notion of De Swaan (1979) that educational level is an important determinant of proto-professionalization. This finding also agrees with the suggestion of Freidson (1970) that educational level may be the most useful indicator of the compatibility of a lay culture with the professional culture.
Proto-professionalization is accompanied by a lesser propensity to use health services for common illnesses, and stronger beliefs regarding the positive effects of health behavior. When incorporating the concept as predisposing variable in the Andersen Model, proto-professionalization turns out to be associated with more favorable enabling conditions (private insurance, higher income) and less need for care (better health status).

We examined the unique contributions of proto-professionalization to the use of GPs, specialists, and physiotherapists, by simultaneously analyzing the effects of predisposing, enabling and need variables. Proto-professionalization significantly heightens the odds of seeing a specialist or physiotherapist, but is not related to the likelihood of consulting a GP. An individual's propensity to use health services for common illnesses, on the other hand, significantly increases the odds of seeing a GP, whereas this variable has no effect on specialist or physiotherapist utilization. At the multivariate level, education is still positively

associated with specialist utilization, but the unique contribution of educational level to physiotherapy utilization is non-significant.
In accordance with the research literature on the Behavioral model (Andersen, 1995), the enabling and need variables together explain most of the variance in care use. Enabling conditions play a significant role in the use of each of the three services; in the case of GPs and specialists the individual's insurance status (having a health insurance, and being privately insured) affects the likelihood of care use, while the odds of physiotherapy use are heightened by a higher income. The latter finding may be explained by the fact that most insurances in Curaçao cover only a limited number of physiotherapy sessions. People with higher incomes will probably sooner make follow-up appointments at their own expense.
The need variables are important determinants of use of all three care providers. This was to be expected, since these variables represent the most immediate cause of curative health services use. Their contributions differ according to the type of service under study: chronic illness is related to the use of all three services, but having everyday symptoms is only related to GP use.

Effects of predisposing variables with varying need

The final step in the analyses was to examine whether the importance of sociocultural variables in determining use increases as need decreases. To this end, sociocultural differences in services utilization for everyday symptoms were analyzed, and compared with differences in seeking professional help for more serious, chronic disorders. Both educational level and proto-professionalization were used as indicators of subjects' sociocultural background, and their age- and sex-adjusted effects were analyzed. The results largely support the assumption that sociocultural differences in health services utilization will only occur below a certain level of illness severity. As hypothesized, higher educated and more proto-professionalized people are less likely to seek care for everyday symptoms. In addition, proto-professionalization is accompanied by a greater likelihood of using over the counter medication for these symptoms. The increased empowerment of those who are higher educated and more professionalized, and their improved abilities to exercise appropriate control over their health, appear to have led to increased self care and improved decision making about which minor symptoms require professional attention. We also found some empirical support for the notion that the heightened health consciousness among the higher educated and more proto-professionalized people leads to a reduced tolerance for minor symptoms: they report higher prevalences of several everyday illnesses.

When conditions reach a more serious stage, the differences in incidence of care utilization disappear: for most of the chronic disorders studied, the higher educated and more proto-professionalized individuals are just as likely to seek professional treatment as the less advantaged groups. However, whether a person seeking professional treatment is referred to a specialist is not only determined by the severity of the illness. When comparing people with the same chronic condition, proto-professionalized people more often receive specialist treatment, probably because they are better equipped to persuade GPs to refer.

Comparison with international research findings

The strong socioeconomic inequalities in use of specialists and hospitals that were found in this study contrast with findings from countries such as the Netherlands (Van der Meer, Looman and Mackenbach, 1994), Canada (Newbold, Eyles and Birch, 1995) and Finland (Keskimäki, Salinto and Aro, 1995). Health policy in Curaçao has pursued equity of access to health care through the removal of financial barriers. The island has a mixed public and private health insurance system. Free health care is guaranteed for inhabitants with a substandard level of income in the so-called PP (Pro Pauper) regulation. So, in principle there are no financial barriers to care. Nevertheless, the health care system in Curaçao appears to be less equitable than health care in the countries mentioned. This may first of all be explained by relatively strong inequalities in other enabling conditions in the Curaçao health care system, i.e., inequalities in the organization of the care delivered to publicly and privately insured patients. Secondly, there may be stronger inequalities in predisposing factors in the Curaçao population.
As regards the first explanation, it is important to note that most specialists are part-time employed by the government to deliver care to PP patients. In addition to their private practice they have limited public consultation hours at the outpatient clinic of the main hospital of the island. Research has shown that PP patients have a markedly longer waiting time for an appointment with the specialist than the privately insured (Alberts et al., 1996). This may be associated with an unfavorable specialist-to-population ratio (i.e., fewer specialists and/or consultation hours per capita) for the PP population. Moreover, specialists have no financial incentives to exert themselves to shorten the waiting times for their public patient population, since they receive a fixed salary regardless of the numbers of patients they see. However, this can not completely explain the strong inequalities in specialist utilization, for also under the same enabling conditions the higher educated and more proto-professionalized are still more likely to see a specialist.

The second explanation lies in a divergent distribution of predisposing factors in the Curaçao population. There is a relatively strong disparity in educational levels as compared to more developed countries, such as the Netherlands, where this determinant of care utilization is more homogenous across the population (Wouters, 1992; Central Bureau of Statistics, 1993). This probably implies a stronger disparity in levels of proto-professionalization across the Curaçao population, and a wider cultural gap between medical professionals and the least proto-professionalized lay members. Moreover, decreasing levels of education and proto-professionalization are presumably accompanied by a less 'westernized' orientation among members of this Caribbean society, which may widen the cultural gap with western medicine even more. A common assertion in support of this latter notion is that physicians who received their vocational training in the South-American region are believed to be more popular among patients than physicians who were trained in the Netherlands, supposedly because their professional manners are more compatible with the Caribbean lay culture (e.g., they spend more time on each patient, they take traditional health beliefs more seriously, etc.).
Perhaps this relatively strong cultural gap between professional and lay member could also explain the relatively low use of GPs by older people in Curaçao as compared to the Netherlands. They are the ones with the lowest levels of education and proto-professionalization, and will probably experience the strongest cultural barriers in access to care.

7.3 Different models for different aspects of health services utilization

As Andersen and Newman (1973) already suggested, the relative importance of the various determinants of health care utilization varies with the type of health service under study, and the purpose of use. However, the study outcomes suggest that it is not only a matter of relative weight of the various explanatory variables, but that there are rather different mechanisms at work in the process of help seeking, depending on the severity of the health problem and the type of health service under study. It appears that the explanation of sociocultural differences in health services utilization can not be captured in one generalized theoretical model. Instead, it seems more accurate to argue for the possibility of two alternative models that apply differently, depending on the need for care and the accessibility of the health service that is sought. We can illustrate this by comparing the determinants of GP utilization, specialist utilization, and physiotherapy utilization.
The GP is a primary care provider, and can be consulted for all types of health problems. Accordingly, it was found that GP utilization is

contingent upon the presence of everyday signs and symptoms as well as serious morbidity. The GP is a directly accessible, familiar source of care. To obtain access, there is no need for patients to bring into use their power, negotiation skills or knowledge of the medical system. Hence, an individual's level of education or proto-professionalization does not significantly heighten the likelihood of GP utilization. Since the GP is directly accessible for all kinds of health problems, it is up to the individual to decide whether an experienced symptom is self-limiting, manageable by home remedies, or serious enough to require the GP's intervention. Therefore, a factor that does predispose an individual to GP utilization is his or her propensity to seek professional help for common illnesses; individuals who are less discriminating in deciding which symptoms warrant a physician's attention are more likely to consult a GP for minor signs and symptoms. As illness severity increases, opinions regarding the necessity of consulting a GP converge, and predisposing variables no longer play a significant role in the process of seeking help from a GP.

The specialist is a secondary care provider, in theory only accessible upon referral by a GP, and not meant to be consulted for everyday signs and symptoms. Accordingly, the likelihood of consulting a specialist is not affected by the presence of a common illness. Access to specialist care is obtained under two conditions: a) when the health problem is serious enough to require specialist intervention (e.g., when it can not be adequately diagnosed or treated by a GP), and b) when the patient has enough power or skills to influence the referral practices of the GP or to directly approach the specialist. This empowerment is strongest among the higher educated and the proto-professionalized, so these groups are more likely to consult a specialist.

The physiotherapist is also a secondary care provider. Consequently, the determinants of physiotherapy utilization show largely the same effects as they did for specialist utilization, with one exception: the explanatory power of proto-professionalization is comparatively strong, at the cost of the contribution of educational level. This may be explained by the fact that physiotherapy is a less common, less familiar type of health care than physician care. So, when it comes to obtaining access to this service, the proto-professionals' social nearness to the profession and their knowledge of treatment options will predominantly come into play.

In short, the explanatory mechanisms behind variations in curative health services use differ with:

a. illness severity or 'need';
b. the accessibility of the health service, both in terms of entry (i.e., directly accessible primary care versus secondary care for which a referral is required) and in terms of familiarity (is it a

'common' health service or is it only familiar to those who have more knowledge of the medical circuit).

Combining these two factors would yield four theoretically distinguishable cross-relationships (see Figure 7.1).

Use of health services is primarily determined by need and enabling variables, so when the need is high and the health service is directly accessible, there will be no sociocultural differences in services use.

Figure 7.1
Effects of sociocultural variables on health services use with varying need and accessibility of care

	High need (serious morbidity)	**Low need (everyday illness)**
High accessibility (primary care)	Use is not influenced by sociocultural variables	Use is influenced by sociocultural variables, i.e. the subject's dependency in illness
Low accessibility (secondary care, less familiar care)	Use is influenced by sociocultural variables, i.e. the subject's skills to obtain access	No services use

Conversely, when the need is low and the health service is not directly accessible, there will be no services use. For example, everyday illnesses are not likely treated by a specialist[1]. Hence, there appear to be two alternative models for the explanation of sociocultural variations in curative care use:

1. *low need x high accessibility*: with decreasing severity of health problems, and thus a decreasing significance of 'need', there is an increase in the explanatory power of an individual's dependence in illness, i.e., his or her propensity to seek professional help for health problems;
2. *high need x low accessibility*: when services are less easily accessible, either in terms of entry (secondary care) or in terms of familiarity, there is an increase in the explanatory power of the subject's skills to obtain access.

[1] Since in the health care system under study the GP functions as gatekeeper to secondary care, specialist utilization for everyday illness is practically non-existent. It would be interesting to study the determinants of specialist care use for everyday illness in another health care system, for example health care in the USA where practically all medical specialists are directly accessible.

Before discussing the two possible models, a few general remarks are due. First of all, it is up for debate where everyday illness ends and serious morbidity starts. Health problems reflect a continuum ranging from minor unwell-being to terminal pathology. Some symptoms, most notably injuries, need immediate professional attention and leave little ambiguity about the required course of action. But for many symptoms and disorders the interpretation is not so clear-cut (Kooiker, 1996): are the symptoms a sign of a more serious underlying condition, or are they harmless and self-limiting? Since our research is focused primarily on the compatibility of the lay culture with modern medicine, it seems sensible to draw the line between everyday illness and serious morbidity from a care provider's point of view. We define serious morbidity as any symptom or health problem which according to medical insights definitely requires professional intervention. Everyday illness comprises health problems which, according to professional views are either self-limiting or manageable by self care.
Second, to optimally illustrate the differences between the models, we have left the explanatory variables which are common in the two models out of consideration. Lower age is associated with higher levels of education and proto-professionalization. Female sex is positively related to both everyday illness and serious morbidity, and to both primary care use as well as secondary care use. Enabling factors, such as insurance status and income, also have a similar effect in the two models: they mediate the relationship between the predisposing and need variables on the one hand and the utilization variables on the other hand.

Primary care use for everyday illness (i.e., low need and high accessibility)

The first model (Figure 7.2) illustrates the process underlying use of primary care (high accessibility) for everyday illness (low need). Services utilization is a function of both perceived symptoms and an individual's propensity to seek professional help for everyday illness. Higher educated and proto-professionalized people are less inclined to seek help for minor signs and symptoms. They feel more competent to decide the appropriate behavior when they are ill. Provided the symptoms are known and the outcome is predictable, they are more likely to engage in self-treatment or recognize minor symptoms as self-limiting. Their opinions on which health problems warrant professional intervention largely correspond with the opinions of medical professionals.
Lower educated, less proto-professionalized individuals are much more inclined to leave the responsibility for their health to professionals, i.e., they demonstrate a high dependency in illness. They basically display Parson's (1951) traditional sick role behavior: when ill, there is a moral

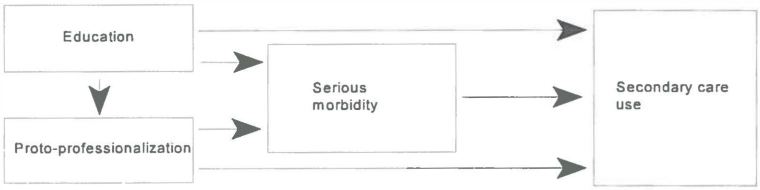
Figure 7.2
Primary care use for everyday illness

obligation to seek professional legitimation and competent help. Or as Cornwell (1984) puts it: in the process of medicalization of life, they have come to lose faith in their own knowledge and information ("the accumulated wisdom of laymen") and in their own powers of judgement. Nevertheless, they do not necessarily make more extensive use of primary care than higher educated and more proto-professionalized individuals, because their use propensity is counteracted by a relatively high tolerance for signs and symptoms: illness is inherently undesirable and one should not readily give in to it (Blaxter, 1983; D'Houtaud and Field, 1984). Higher educated and more proto-professionalized individuals, on the other hand, will recognize and acknowledge more minor ailments. As Barsky (1988) argues, the increased value that is placed on 'good health' has raised the standards used for judging health, so that people are more disturbed by symptoms that were previously deemed less important. As a consequence of their heightened awareness of possible 'danger signals', higher educated and proto-professionalized individuals will recognize and identify more everyday symptoms, and part of these will be judged as requiring medical attention.

Secondary care use for serious morbidity (i.e., high need and low accessibility)

As can be seen in the second Model (Figure 7.3), the use of secondary care is a function of both need and patient empowerment. The extent to which an individual is free to decide whether to consult a professional, is firstly determined by the urgency and perceived danger of the health problem. With increasing illness severity (i.e., increasing need), the

Figure 7.3
Secondary care use for serious morbidity



significance of an individual's dependency in illness (use propensity) disappears. There is consensus among professionals, proto-professionals and lay members that the morbidity is serious enough to require professional attention.

Higher educated and more proto-professionalized individuals experience less serious morbidity than the less advantaged groups. However, use of secondary care is not only determined by the presence of serious morbidity. Secondary care is only accessible upon referral by a physician, so here the patients' knowledge of the medical system and their competence to influence the decisions of the referring physician come into effect.

Higher educated and more proto-professionalized patients exert more control and assume a more equal footing with professionals in terms of decision making and responsibility for outcomes. They have rejected the traditional model of medical care which portrays doctors as all-powerful individuals with the training and intellect to make life-or-death judgements and assumes patients to be completely dependent on those judgements (Cockerham et al., 1986b). Instead, they have assumed more of a consumer position with regard to health care. Their empowerment enables them to more successfully negotiate with care providers, and secure themselves of the care they think is best. In the process of negotiating diagnosis and treatment options, physicians and patients each bring different resources to the encounter. Apart from their body of knowledge and experience, physicians can bring in their institutionalized role as gatekeeper to desired services, and a tradition of authority. Patients also have resources, including their own knowledge, the threat to take their business elsewhere, and their institutionalized right to 'informed consent' before any invasive procedures are started (Haug and Lavin, 1981). Patients who are more skilled in bringing these resources to the encounter -i.e., the higher educated and more proto-professionalized- will have a stronger negotiation position, and their demand to receive secondary care for a given illness will be more readily granted than that of less advantaged people with the same illness.

With these two models, it is possible to explain use of different types of health care for varying health problems. They do not explain preventive care utilization. Although the sociocultural determinants of preventive care use were not analyzed in this study, it is interesting to reflect on the possible mechanisms underlying differences in this type of care utilization following the previous line of reasoning.
The significance of perceived need as determinant of care use decreases with decreasing illness severity, and is reduced to zero when it comes to preventive services utilization. Hence, it is very well possible that the significance of predisposing (sociocultural) variables in determining preventive services use will be maximized. Apparently, use of preventive services represents a response to a different set of concerns than those important to illness-related services utilization. Instead of perceived need, the perception of being at greater risk of contracting a serious illness may be a useful variable in predicting preventive use (Rosenstock, 1966; Hulka and Wheat, 1985). One might anticipate that this perception is contingent upon an individual's health consciousness and awareness of the factors that may endanger good health. These attributes are related to an individual's levels of education and proto-professionalization.
The second aspect that distinguishes preventive use of care, is that the 'profit' of the help-seeking behavior is not immediately noticeable. Professional help is not sought to relieve actual pain or discomfort, but to prevent possible future health problems, and this is done on the basis of certain professional insights and beliefs (Cassee, 1973; Bernts, 1991). Thus, we can hypothesize that among the predisposing variables proto-professionalization will be the strongest predictor of preventive care use, because the proto-professionals' greater health-related knowledge, their stronger sense of control over health outcomes and their heightened health consciousness all act to promote preventive behavior. Moreover, the effect of proto-professionalization will probably be strongest when the accessibility of the health service sought is low, since in this case the individual's skills to obtain access also come into play.

7.4 The value of the concept of proto-professionalization

Although proto-professionalization is strongly related to level of education, the study results support the application of proto-professionalization and educational level as two complementary determinants of health services utilization. Having a higher education does not necessarily mean that one is optimally equipped to deal with the culture of medicine and, conversely, people with a lower education can be very skilled to stand their ground in the health care system. While educational level is a dimension of a person's socioeconomic status, proto-professionalization is derived particularly from the social circles

one moves in, and from sharing insights, beliefs and behavioral standards with those who belong to that circle. People can belong to certain social circles irrespective of their socioeconomic position.

The concept of proto-professionalization seems to provide a promising framework for explaining various behaviors relevant to health and for unifying what, so far, are unrelated findings from different approaches to the study of health-related behavior. The appropriateness of using one global measure for proto-professionalization may be a subject for debate. Why not include the underlying elements (network, knowledge, control) as separate dimensions/indicators in the analysis? From an analytical point of view this could be a more suitable option, e.g. if one wants to unravel the unique contributions of specific knowledge or attitudes to certain behavioral intentions. However, from a theoretical point of view proto-professionalization is seen as a generalized orientation that expresses the extent to which a patient's sociocultural context is compatible with the culture of modern medicine. Proto-professionalization is based on a complex of interrelated variables that collectively form the building blocks of a generalized orientation which affects health-related behavior.

Since proto-professionalization is seen as a global construct, a variety of indicators tapping various aspects of the same theoretical dimension need to be included in the instrument. In this respect, the theory of proto-professionalization is grounded in the same holistic approach as Antonovsky's 'Sense of Coherence' theory (Antonovsky, 1993). Sense of coherence is seen as a global orientation that is at the basis of relations among stressors, coping and health. It does not refer to a specific type of coping strategy, but to a complex of factors -e.g., ego strength, cultural stability, social support- which have in common that they promote a way of seeing the world which facilitates successful coping with stressors.

The variance in curative health services utilization explained by proto-professionalization is quite small. However, this does not necessarily imply a limited explanatory power of the concept. The use of curative services is first and above all determined by the need for such services and factors that enable use. It is only when the need and enabling variables play a less prominent role that predisposing variables come into effect. In other words: financial and system resources must be available, and the services utilization must at least to a certain extent be discretionary (i.e., directed toward conditions for which immediate care is not required). Under those conditions, proto-professionalization can predict the likelihood of certain help-seeking behavior, and by that it can offer important starting-points for health policies and intervention strategies.

7.5 Methodological aspects of the study

This cross-sectional study is based on retrospective data that were collected by means of face-to-face interviews among a randomized sample (n=2248) of the adult non-institutionalized population. The methodology of health interview surveys was originally developed in Western Europe and North America. When performing a health survey in the Caribbean, the methodology has to be adapted to the specific conditions of multi-ethnic communities with a large variation in socio-economic levels of different population strata.

Cross-cultural application of a health interview survey

It was essential that the Curaçao Health Study be extensively piloted, in order to test the organizational and infrastructural feasibility of a health interview survey in Curaçao, to test the interview protocol in the Curaçao setting, and to test the semantic and conceptual equivalence of the original Dutch questionnaire and the translated versions. The questionnaire has been piloted in face-to-face interviews (n=134) and in a paper-and-pencil version (n=98).
There were some specific points of concern (Alberts et al., 1993; 1996): *first*, the existing instruments for measuring perceived health and illness behavior, which have been developed in a Euro-American setting, should be tested on their cross-cultural validity, for illness perception and reporting is partly a culturally determined pattern. Psychometric analyses on the pilot data showed that most instruments yielded valid and reliable information.
Second, experience with survey research in Curaçao has shown that self-administered questionnaires have a high level of difficulty for participants with little education (Alberts, 1992). Consequently, it seemed preferable to do interview surveys. Comparison of the pilot results showed that face-to-face interviewing led to a higher response rate and more complete data. Furthermore, no indication was found that data collected in face-to-face interviews was more strongly affected by social desirability: the subjects did not give a more positive evaluation of their health status than subjects who completed a self-administered questionnaire.
Third, the closed questions with fixed alternatives that are used in a health survey require an interview situation where the subject is able to classify his or her opinion in fixed categories. This requires a certain familiarity with questionnaires and may be particularly difficult with attitudinal and hypothetical questions. To avoid biases towards the more literate and better educated participants the difficulty level of the questionnaire had to be evaluated during the pilot phase. The experiences with the interview protocol were generally positive. A few instruments

and items that turned out to be too difficult for some participants or that appeared not to fit within the Curaçao cultural setting were removed from the questionnaire.
Fourth, Curaçao, like other countries in the region, is a multilingual island. This means that the survey questionnaire had to be available in the main languages used on the island, i.e., Papiamentu, Dutch, Spanish, and English. In the process of translation considerable attention was devoted to achieving both semantic comparability and conceptual equivalence between the translated questionnaires. The texts were translated by professional translators who tried to render the original wordings as literally as possible. Because Papiamentu has a relatively small vocabulary and because there are considerable differences between the official written language and the spoken language, the Papiamentu version of the questionnaire was evaluated and 'culturalized' by a group of people with expert knowledge of the popular language.
Semantic comparability of the different versions was established by a panel of proof-readers. The criterion for equivalence was whether the meanings of the questions in their translated forms were interpreted in the same way by the participants. The condition of conceptual equivalence is met when it can be shown that responses to questions are indicators of the same concept. The conceptual equivalence of the Papiamentu and Dutch questionnaires was established in the pilot study. The other two versions could not be piloted because Spanish and English are spoken by a minority of the population. Hence those two language groups were not sufficiently represented in the small pilot sample.
In short, the interview survey has been extensively piloted, and as a result of this project a reliable instrument for research among Caribbean populations is available. Another positive aspect of this study is the high response rate (85%). As a consequence the study sample can be considered to be highly representative of the adult non-institutionalized population. This fact, combined with the thorough and accurate data collection, guarantees that the present study is based on valid and reliable data.

Study design

Inevitably, there are some drawbacks to the study design. Since the data were derived from a *cross-sectional* study, it is not possible to draw any conclusions concerning the direction of relationships between the variables under study. In this light it is important to note that health services utilization is not only an outcome of need, but that it is also a determinant of an individual's health status. Likewise, it is very well possible that utilization is not only affected by proto-professionalization, but that the process of proto-professionalization is also influenced by a person's experiences with health care. In a longitudinal survey study

Goldsteen and colleagues (1994) found that there was a reciprocal relationship between locus of control and utilization. For example, individuals with a chronic disorder who have to stay under physician supervision could move to a more external orientation since experience has taught them that they cannot master, control, or change their own health status. By the same token, other aspects of proto-professionalization may be affected by a person's disease history and experiences with health care.

A limitation of the *retrospective* data used in this study is that the time frames associated with the recall of services use differ from the recall periods of most of the assessed health measures. On the other hand, an important advantage of our study design is that assessments of health status independent of service utilization were used. As opposed to many studies which assess health and use as aspects of the same concept, leading the variables to be highly correlated, the health measures in this study represent underlying need for services independent of availability of services (Ranchor, Sanderman and Van den Heuvel, 1990; Häkkinen, 1991).

The fact that the data are based on self-report may have caused some recall bias. First of all, people can forget some of the contacts; the longer the reference period, the more contacts are forgotten. This memory effect is not equal for all health services under study: GP consultations are more easily forgotten than hospital admissions. Therefore, following the recommendations of the Dutch Central Bureau of Statistics (Van den Berg, 1983), we restricted the reference period for estimating the numbers of GP and specialist consultations to two weeks. A second source of recall bias is that people do remember the contact but not exactly when it took place. Contacts can be displaced in time both backwards and forward (telescoping effect). This may have caused an underestimation of the absolute levels of health services utilization that were described in Chapter 2. Nevertheless, it will not have hampered the comparison drawn with data on health care use in the Netherlands, since both studies used exactly the same instruments and the same reference periods. We may assume that recall effects were equal in both data sets.

The constructed index of proto-professionalization

Finally, some methodological remarks concerning the constructed index of proto-professionalization are due. The validation analyses on the instrument constructed in this study show satisfactory results, and the similarities with the research findings in the Netherlands (Geurts and Furer, 1992) support the cross-cultural validity of the concept.

As compared to the instrument constructed in the Netherlands (Geurts and Furer, 1992) our index covers more aspects of the 'knowledge' and

'control' elements. The Dutch instrument is focused quite strongly on proto-professionalization in relation to formal health care, whereas the present instrument includes elements of the lay culture that relate to a broader domain of health care, including self care and preventive behavior. The Dutch instrument measures 'knowledge of health services'; we added a measure for 'knowledge of health behavior'. In addition to the external locus of control dimension 'doctor orientation' included in the Dutch instrument, the present index also encompasses chance and magic orientations.

An important difference between our instrument and the instrument developed by Furer and his colleagues is that we did not include a measure for the capacity or willingness to discuss health-related matters with members of the social network. It was decided to exclude this measure since there are several theoretical arguments against inclusion of this variable.

The index constructed in this study measures important features of the lay culture, but neither our instrument nor the Dutch instrument covers the structural aspect 'looseness (or openness) of the social network', whereas this characteristic of the lay structure does play an important role in both De Swaan's (1979) theory of proto-professionalization as well as in the work of Suchman (1966) and Freidson (1970). In this study we did not have an adequate operational measure for 'looseness of the network' at our disposal. Possibly future research applying a sophisticated operationalization of this concept (e.g., Galaskiewicz and Wasserman, 1993; Walker, Wasserman and Wellman, 1993) could show that having a diverse, open social network is in fact an important element of proto-professionalization.

Another common property of both instruments that deserves further attention is the rather moderate reliability of the knowledge scales. Geurts and Furer (1992) attributed the moderate scalability of their knowledge items to high percentages of 'don't know' answers and answering tendencies. Our study yielded no results in support of this explanation. An alternative explanation for which some empirical support was found, is that individuals with low overall health-related knowledge may have high knowledge of specific aspects of health and the health care system, based on their disease history and experiences with health care. This explanation refers to the earlier suggested reciprocal relationship between proto-professionalization and health care utilization.

7.6 Implications for further research

The concept of proto-professionalization and its instrument offer a useful empirical specification of the sociocultural context as explanatory factor in research on differences in health-related behavior. However, the empirical research on proto-professionalization is yet in its initial phase. Research on the psychometric properties of the constructed instrument among other populations and in different cultural settings could yield further insight in its validity and cross-cultural stability.

More research on the relationships between proto-professionalization and health services utilization is definitely justified. This study addressed the incidence and volume of curative health services use. Insight in the associations between proto-professionalization and other, more specific aspects of curative health care use may enhance our understanding of the relative importance of an individual's sociocultural context. It would, for example, be worthwile to examine the effects of proto-professionalization on physician-patient communication, on decision-making by care providers, and on patient compliance.

Longitudinal research could yield insight in the suggested reciprocity between proto-professionalization and health services use: to what extend is the process of proto-professionalization affected by a person's disease history and experiences with health care?

With respect to the Curaçao setting, more insight is needed in the effects of traditional knowledge and beliefs, stemming from this particular culture, on the process of symptom identification and help seeking, and on the interaction between patients and professionals. It can be argued that, compared to western societies, the incompatibility between the lay culture and the professional culture has an additional dimension. Since the professional culture is dictated by western modern medicine, the cultural gap with lay members not only arises from a less 'professionalized' orientation of the latter group, but also from a less 'westernized' orientation.

Finally, comparative research into the sociocultural determinants of health services utilization in other health care systems with different financial and system barriers, would yield more insight in the validity and applicability of the suggested explanatory models.

7.7 Policy recommendations

The attainment of equity of access to health care is, first of all, conditional upon the equal distribution of enabling factors, such as insurance status and professional-to-population ratios. These variables are also more mutable -in any case in the short run- than predisposing factors such as educational level and proto-professionalization. However, it is

not enough to bring about change through enabling variables without paying attention to sociocultural factors: even in the case of complete technical/objective equity of access, cultural barriers will still bring about inequalities in the process of help seeking and treatment. Patients who have been more succesful in overcoming these barriers exert more control and assume a more equal footing with health care providers in terms of status, mutual expectations, and decision making, which facilitates obtaining access to desired diagnostic or treatment facilities. So, there is a strong point to be made for policy focusing on narrowing the cultural gap between the less advantaged patients and providers by professionalizing the patient and 'deprofessionalizing' the provider. Patients need to be equiped to express their expectations and negotiate their treatment options with providers, and providers need to increase their social and communication skills so that they are more perceptive of the expectations of their least empowered patients. As Mulder (1996) argues, the care provider and the patient each bring their own expertise to the encounter. The provider brings in his professional expertise and knowledge of treatment options. The patient brings in his 'experience of illness' and his knowledge of how different treatment options can be fit in his way of life. In addition to possible benefits, every treatment option can also yield possible risks and costs which can only be evaluated by the patient. In the decision making process on treatment options, the provider is in charge of supplying medical information on possible outcomes, and the patient is in charge of supplying information on the utility these outcomes have in his specific situation. In this way each party contributes to the choice of intervention out of their own 'expertise'.

Strategies to reduce professional dominance, which are ideologically rooted in the anti-authoritarian movement of the 1960s and 1970s, have been widely advocated and applied in many countries for many years already. Even so, it can also be argued that there are limits to the desirable level of empowerment of patients.

First of all, not every patient can or wants to be empowered to the same degree. Some just feel more comfortable in not knowing everything there is to know about their disease status and prognosis. They are not up to taking self-responsibility for health outcomes or participating in decision making, and expect a more authority-based approach from their care provider. The provider needs to have the social skills to evaluate the needs and potentials of each individual patient, and to adjust the distribution of authority accordingly. After all, it is important to bear in mind that equity is not only the equal treatment of equals but also the unequal treatment of unequals according to their inequality.

A *second* limit to the desirable level of patient empowerment bears on the need for cost containment in health care. Empowerment of patients can

escalate into excessive consumerism, a situation in which patients demand the best and the most of everything that health care can offer, irrespective of the medical necessity. The resulting over-use of diagnostic and therapeutic resources does not only drive up the costs of health care, it can also incur unnecessary anxiety about the results of diagnostic tests and may lead to undesirable side effects of treatment.

The question where to draw the line on excessive consumerism can not readily be answered. Partly, the answer lies in the care provider's professional expertise and mandate to judge the medical necessity of diagnostic and treatment options. In the case of a patient with a slight headache demanding an MRI scan the answer may be clear-cut. However, another part of the answer is of an ideological nature. Does a patient have a right to a second opinion? And to a third opinion? Should patients be able to directly approach specialists or should the judgement as to which specialized care is indicated be left to a GP? Aside from accepted screening protocols, are diagnostic tests warranted in the absence of actual symptoms, their sole purpose being to exclude disease and to reassure the 'worried well'? Health care policies differ strongly with respect to these ideological issues. Health policy in the Netherlands is quite strongly opposed to consumerist tendencies (Dutch Health Council, 1991), whereas in the USA the achievements of consumerism are cherished in all aspects of American life, including health care.

The ideological discussion about the limits to consumerism will not be expanded upon here. For now, it is sufficient to observe that health policy needs to intervene if cost containment is at stake and if patients may be subject to harmful side effects of over-treatment. Which tools does policy have to restrict consumerist tendencies? Strategies aimed at bringing about change through predisposing sociocultural factors will probably not be very succesful. The trend toward proto-professionalization of patients can not be reversed: it is no viable option to try to keep patients in the dark or to reinstate the traditional paternalistic doctor. Health education aimed at increasing the patient's competence to judge the medical necessity of treatment options is probably doomed to fail. Rationally, people may very well comprehend that 'more care' is not necessarily 'better care', yet when faced with a threatening disease rational arguments no longer apply. Patients hope for recovery, and are willing to place their hope in most anything that can hold out the prospect of recovery to them (Mulder, 1996).

Tools for policy to restrict consumerism can rather be found in the sphere of enabling factors, for example by defining the type and quantity of care that is covered by insurance plans, and by restricting the numbers of care providers and the supply of facilities. It goes without saying that these measures should also be guided by the equity principle.

Implications for health policy in Curaçao

What do these general recommendations amount to when it comes to health policy in Curaçao?
Before going into the consequences of this study for local health policy, a more general remark is called for: the inequities that arise from the unequal distribution of enabling factors in the mixed public and private health care system may be taken to be common knowledge among policy makers. Over the past years, the insurance system has been exposed to considerable criticism, and major reforms are imminent.
As for the distribution of predisposing factors, the present study suggests that there is a relatively strong disparity in levels of proto-professionalization across the population, and a relatively wide cultural gap between professionals and the least proto-professionalized lay members. As compared to more westernized countries, the trend toward patient empowerment and leveling of the power relationship between providers and patients lags behind. Moreover, the professional stances of providers are dictated by western modern medicine, and those who received their vocational training in the Netherlands may not be very well equiped to bridge the gap with the Caribbean lay culture.
Accordingly, the necessity of policy aimed at increasing health knowledge, independence in illness, and assertiveness of patients, while simultaneously increasing the communication and social skills of providers is evident.
How can this be achieved? Health education is one of the available tools. Mass media are helpful in popularizing medical knowledge and making it accessible to a broad public. Patients' associations and pressure groups can play an important role in advising and informing patients about their rights and in stimulating their assertiveness.
Care providers need to be trained in enlarging their communication skills (e.g. by talking in plain, understandable language), and in involving patients in decision making. One of the options to attain the latter is by making social skills training an integral part of the vocational training for general practitioners that is currently being established on the island.
Nurses have an influential part to play as 'care managers' and as intermediates between patients and physicians; they need to be prepared for this role in nursing school. Specialists and most other health care providers receive their vocational training abroad, mostly in the Netherlands. For them, and for professionals in the field, retraining activities could be instituted.
Curaçao can take advantage of the lessons learned in more prosperous countries with respect to setting limits to rising consumerism. There are various structural and organizational factors in the health care system that encourage consumerist tendencies. Physicians in Curaçao have freedom of establishment, there is no policy to restrict the establishment

or distribution of private practices. This has led to a surplus of physicians in certain areas of specialization, resulting in mutual rivalry and in a problematic relationship with general practioners. Among the latter it is claimed that specialists tend to treat patients for problems that formally belong to the domain of the GP (Van Voorn, 1995). Because such a situation stimulates the tendency to work on 'costumer relations', physicians will be more amenable to patients' demands for diagnostic procedures, medication, and treatment. Policy can intervene by introducing restrictions to the establishment of private practices, based on need assessments, and by taking measures to guard and stimulate the central role of general practitioners as gatekeepers.

Equity of access to care is about *equal* opportunity for care, but it is not about *unlimited* opportunity for care. The limits to available care are set by a community's resources to sustain such care.

Appendix

Items of the instruments included in the index of proto-professionalization

Knowledge of health behavior (True, False)

1 Smoking during pregnancy is harmful to the child (T)
2 Physical exercise is bad for old people (F)
3 Some extra weight protects you against diseases (F)
4 A seat belt is only necessary if you are driving very fast (F)
5 Beer and wine are less harmful to your health than hard liquor (F)
6 Fish and chicken are healthier than other kinds of meat (T)
7 If you eat too much sugar, you'll become a diabetic (F)
8 Smoking is only bad if you smoke every day (F)
9 Smokers can damage the health of non-smokers (T)
10 You can have high blood pressure without noticing it (T)

Knowledge of health services (True, False)

1 For aids and appliances, such as crutches, wheelchairs, special bed, etc., you can approach the district nursing service (T)
2 The Mental Health Department also offers help in the case of upbringing problems (T)
3 The family doctor does not give treatment to small children; for such treatment you always have to go to the pediatrician (F)
4 If you have bought a spoiled product at the supermarket, you can notify the Public Health Service so that it can be investigated (T)
5 With a lab-form from the family doctor (to have a blood sample taken) you can only apply to the laboratory at the Polyclinic (F)
6 The district nursing service offers help in the home-care of patients (T)
7 If you become ill at night, you have to go, first of all, to the emergency unit of the hospital (F)

Locus of Control (1 Strongly agree .... 6 Strongly disagree)

Chance orientation

1 No matter what I do, I'm likely to get ill
2 If it's meant to be, I will stay healthy
3 My good health is largely a matter of good fortune
4 Luck plays a big part in determining how soon I will recover from an illness

Doctor orientation

1 Regarding my health, I can only do what the doctor tells me to do
2 Doctors determine my health
3 The best way for me to avoid illness is to consult a doctor regularly
4 Whenever I don't feel well, I actually should consult a doctor

Magic orientation

1 I feel that evil powers can influence my health
2 The best way for me to avoid illness is not to have any enemies
3 Other people can make me ill, if they are ill-disposed towards me
4 If somebody is evil minded towards me, I have to be careful with my health

The social nearness to health professionals

Do you have some one in your family, circle of friends or acquaintances who is a ...? (Yes, No)

1 Doctor or dentist
2 Psychiatrist or psychotherapist
3 Psychologist
4 Social worker
5 Nurse or district nurse
6 Ward attendant or geriatric helper
7 Physiotherapist
8 Dietician
9 Priest, minister or any other clergyman
10 Any other expert in the field of health, disease and problems, namely: ___

Summary in Dutch

Achtergrond en doelstellingen

Een belangrijk uitgangspunt voor reorganisaties in de gezondheidszorg is de rechtvaardige verdeling van zorgvoorzieningen. Het bereiken van gelijke toegankelijkheid van gezondheidszorg voor iedereen -een internationale beleidsdoelstelling, vastgelegd in WHO's Targets for Health for All by the Year 2000 (WHO, 1985)- betekent dat de toegang tot zorg in eerste instantie bepaald wordt door een individu's behoefte aan zorg, en niet door sociale privileges.
Aan de basis van deze studie ligt de op beleidsniveau gevoelde behoefte om inzicht te krijgen in ongelijkheid in de toegankelijkheid van zorg op Curaçao en om oplossingen te zoeken die kunnen bijdragen aan een rechtvaardiger verdeling van zorg. Om dit te bereiken is onderzoek nodig dat niet alleen de diverse factoren identificeert die gezondheidszorggebruik beïnvloeden, maar deze factoren ook in een toetsbare theoretische context plaatst en hun onderlinge samenhang verklaart. Het theoretische doel van dit onderzoek is dan ook om verschillen in het gebruik van gezondheidszorgvoorzieningen en verschillen in zorggebruik voor vergelijkbare gezondheidsproblemen te verklaren. Gebruik van gezondheidszorg omvat een breed scala aan gedragingen. Dit onderzoek richt zich op curatieve medische consumptie, dat wil zeggen: het gebruik van professionele gezondheidszorgvoorzieningen voor diagnose en behandeling.

De theoretische achtergrond van de studie wordt beschreven in hoofdstuk 1. Voor de ordening van de onderzochte determinanten van medische consumptie is gebruik gemaakt van Andersen's Behavioral Model of Health Services Use (Andersen en Newman, 1973; Aday en Andersen, 1974). In dit model worden de verklarende variabelen niet zozeer gegroepeerd op basis van hun conceptuele overeenkomst, alswel op basis van de wijze waarop ze zorggebruik beïnvloeden. Het model categoriseert de individuele determinanten van zorggebruik in drie groepen: predisponerende factoren (consumptie bereidheid), gelegenheidsfactoren (consumptie mogelijkheid), en behoeftefactoren (consumptie noodzaak). De *predisponerende factoren* omvatten het complex van individuele eigenschappen die een persoon in meerdere of mindere mate voorbeschikken tot medische consumptie, onafhankelijk van de daadwerkelijke behoefte aan zorg. Hieronder vallen demografische, sociaal-structurele en houdingsvariabelen. Onder de *gelegenheidsfactoren* in het model vallen de middelen/bronnen die het gebruik van zorgvoorzieningen mogelijk maken danwel bemoeilijken, zoals financiële

middelen (inkomen, ziektekostenverzekering) en factoren aan de aanbodszijde (bijvoorbeeld aantal zorgverleners en bereikbaarheid van voorzieningen). De *behoeftefactoren* vertegenwoordigen de meest directe reden voor medische consumptie. Behoefte aan zorg wordt meestal gemeten aan de hand van zelfgerapporteerde symptomen en aandoeningen, functionele beperkingen en ervaren gezondheidstoestand.
Dit onderzoek richt zich op de predisponerende factoren in het Andersen model, waarbij met name wordt ingegaan op de effecten van een individu's sociaal-culturele achtergrond. Individuele kennis, attitudes, opvattingen en gedragingen worden grotendeels bepaald door iemand's sociaal-culturele achtergrond. Ook op het gebied van gezondheid en ziekte worden mensen beïnvloed door de in hun sociale omgeving heersende normen en waarden met betrekking tot medische zaken. Met andere woorden: de sociaal-culturele achtergrond levert een context voor de identificatie en perceptie van gezondheidsproblemen en voor het daarop volgend ziekte- en hulpzoekgedrag.
Het door De Swaan (1979, 1981) geïntroduceerde concept *protoprofessionalisering* biedt een bruikbaar theoretisch raamwerk voor de analyse van sociaal-culturele verschillen in medische consumptie. De protoprofessionaliserings-theorie is gebaseerd op het werk van Suchman (1966) en Freidson (1970) die aantoonden dat de sociale structuur (parochiaal versus cosmopolitisch) en de 'lekencultuur' (populair versus wetenschappelijk georiënteerd) belangrijke determinanten van medische consumptie zijn. De theorie baseert zich ook op onderzoek van Kadushin (1966) waaruit blijkt dat, afhankelijk van de sociale kringen waartoe men behoort, mensen houdingen en oriëntaties ontwikkelen die het gebruik van bepaalde zorgvoorzieningen bevorderen.
De term protoprofessionalisering verwijst naar de mate van overeenstemming tussen de lekencultuur en de cultuur van een professie. Protoprofessionalisering is het proces waarbij professionele kennis en inzichten doordringen in de lekencultuur. Het proces wordt impliciet verwoord in termen zoals 'juridicalisering', 'psychologisering' en 'medicalisering' van het dagelijks leven. Veel inzichten en grondhoudingen die mensen in moderne samenlevingen aanhangen zijn de protoprofessionele tegenhangers van professionele inzichten. Zo worden bijvoorbeeld de hygiëne standaard die mensen hanteren, het belang dat zij hechten aan lichaamsbeweging en de manier waarop zij hun voedsel bereiden, deels gedicteerd door opvattingen die de medische professie er op na houdt.
De belangrijkste karakteristieken van geprotoprofessionaliseerde mensen is dat ze de professie sociaal nabij zijn -hetzij via werk hetzij via informele contacten- en dat zij de eersten zijn die concepten, inzichten en basishoudingen van de professie overnemen. Personen die sterk medisch geprotoprofessionaliseerd zijn verkeren in sociale kringen waar zij frequent contact hebben met medische professionals, ze zijn beter bekend met het aanbod en de mogelijkheden van gezondheidszorg, hebben meer kennis

van de invloed van gedrag op gezondheid, en hebben een sterker gevoel van controle over hun eigen gezondheid. De drie elementen 'sociaal netwerk', 'kennis' en 'beheersingsoriëntatie' bepalen samen in hoeverre een persoon is geprotoprofessionaliseerd, en de mate van protoprofessionalisering beïnvloedt weer een persoon's predispositie tot medische consumptie.

Behalve het effect van protoprofessionalisering worden in dit onderzoek ook de effecten van de meer 'gangbare' predisponerende factoren in het Andersen model geanalyseerd, namelijk sociaal-demografische variabelen (leeftijd, geslacht) en sociaal-economische status (opleidingsniveau). Gelegenheidsfactoren (consumptie mogelijkheid) en behoeftefactoren (consumptie noodzaak) worden meegenomen als controle-variabelen. Het onderzoek richt zich niet op de effecten van gelegenheidsfactoren op medische consumptie: er wordt zondermeer van uitgegaan dat zowel financiële factoren als factoren aan de aanbodszijde essentieel zijn voor de toegankelijkheid van de gezondheidszorg. Op de effecten van de behoefte aan zorg wordt wel meer in detail ingegaan, aangezien de mate waarin een individu vrij is om te beslissen wel of geen hulp te zoeken allereerst wordt bepaald door de urgentie en de ervaren ernst van het gezondheidsprobleem. Andere determinanten van medische consumptie zullen een sterkere invloed hebben, of zullen zelfs alleen dan hun invloed doen gelden wanneer er geen sprake is van een onmiddellijke noodzaak om medische hulp in te roepen. Derhalve wordt in deze studie ook nagegaan in hoeverre de effecten van sociaal-culturele variabelen op zorggebruik variëren met een variërende behoefte aan zorg.

Algemene patronen van medische consumptie

Om een indruk te krijgen van de relatieve omvang van medische consumptie op Curaçao, worden in hoofdstuk 2 de algemene patronen van zorggebruik vergeleken met die in Nederland. Er is gekozen voor Nederlands vergelijkingsmateriaal vanwege de sterke politieke en historische banden tussen Curaçao en Nederland. De meeste Curaçaose zorgverleners hebben hun beroepsopleiding in Nederland gevolgd. Bovendien zijn beide gezondheidszorgsystemen in veel opzichten vergelijkbaar. Zo fungeert bijvoorbeeld in beide systemen de huisarts als poortwachter tot de tweedelijnszorg.
Er is een sterke overeenkomst in de incidentie en omvang van het gebruik van huisartsen, specialisten en ziekenhuizen op Curaçao en in Nederland. Deze overeenkomst is des te opvallender omdat de heersende opvatting onder zorgverleners is dat de medische consumptie op Curaçao hoog zou liggen vanwege een vermeende wijdverbreide neiging tot 'medical shopping' door de bevolking. Dit onderzoek laat zien dat,

althans in vergelijking met Nederland, het gebruik van artsen en ziekenhuizen niet disproportioneel hoog ligt. Het gebruik van tandartsen en fysiotherapeuten ligt op Curaçao aanmerkelijk lager dan in Nederland. Uiteraard bieden deze vergelijkingen geen aanknopingspunt voor de bepaling van het wenselijke absolute niveau van medische consumptie op Curaçao.

Medische consumptie naar leeftijd, geslacht en opleidingsniveau

In hoofdstuk 2 en 3 worden verschillen in het gebruik van elk der genoemde voorzieningen geanalyseerd naar leeftijd, geslacht en opleidingsniveau. Er blijken significante verschillen te bestaan in de *incidentie* van zorggebruik (het al of niet consulteren van een zorgverlener), maar de *omvang* van het gebruik (het aantal consulten per patiënt) blijkt nauwelijks samen te hangen met individuele karakteristieken. Deze uitkomsten ondersteunen de suggestie van Andersen en Newman (1973) dat factoren aan de aanbodszijde, zoals bijvoorbeeld de taakopvatting van de arts, meer bepalend zijn voor de omvang van het zorggebruik dan patiëntgebonden factoren.
Met betrekking tot de incidentie van zorggebruik werden de volgende sociaal-demografische en sociaal-economische verschillen gevonden:
Huisartsen - In tegenstelling tot bevindingen in Nederland is de incidentie van huisartsengebruik op Curaçao vrij gelijk onder de onderscheiden groepen: vrouwen consulteren eerder een huisarts dan mannen, maar er zijn geen significante samenhangen met leeftijd of opleidingsniveau. Gezien het feit dat veroudering in het algemeen gepaard gaat met een grotere behoefte aan gezondheidszorg, is het opvallend dat ouderen op Curaçao niet meer gebruik maken van huisartsen dan jongeren. In het licht van de bestaande sociaal-economische verschillen in gezondheid is de afwezigheid van enige samenhang tussen opleidingsniveau en huisartsengebruik ook opmerkelijk.
Specialisten en ziekenhuizen - De incidentie van specialistengebruik hangt wel duidelijk samen met geslacht, leeftijd en opleidingsniveau: vrouwen, ouderen en personen met een hogere opleiding gaan eerder naar een specialist. De incidentie van ziekenhuisgebruik laat ongeveer hetzelfde patroon zien: een hogere leeftijd en een hoger opleidingsniveau verhogen de kansen op een ziekenhuisopname.
De sociaal-economische verschillen in specialisten- en ziekenhuisgebruik komen niet alleen tot uiting wanneer rekening gehouden wordt met de intermediërende effecten van ongelijkheid in gezondheid, maar ook voordat gecontroleerd wordt voor gezondheidsverschillen. Met andere woorden: er lijkt niet alleen sprake te zijn van horizontale ongelijkheid (vergelijkbare behoefte aan zorg leidt niet tot vergelijkbaar zorggebruik) maar

ook van verticale ongelijkheid in medische consumptie (degenen met de minste behoefte maken het meeste gebruik van zorg).
Tandartsen en fysiotherapeuten - De relatie tussen tandartsbezoek en leeftijd vertoont een omgekeerde U-vorm: jongere volwassenen gaan eerder naar de tandarts dan ouderen, maar in de jongste leeftijdsgroep (18-24 jaar) neemt de kans op tandartsbezoek weer af. De relatie tussen leeftijd en het gebruik van fysiotherapie vertoont een gelijkvormige, maar niet-significante samenhang. Met betrekking tot opleidingsniveau blijkt er zowel verticale als horizontale ongelijkheid te zijn in de toegang tot tandartsen en fysiotherapeuten.
Concluderend kan gesteld worden dat er op Curaçao sprake is van sociaal-demografische en sociaal-economische ongelijkheid in de toegankelijkheid van medisch specialisten, ziekenhuizen, tandartsen en fysiotherapeuten.

Effecten van protoprofessionalisering

Na het vaststellen van deze ongelijkheid in de toegankelijkheid van zorg met betrekking tot de meer 'gangbare' predisponerende factoren in het Andersen model, was de volgende stap in de analyses om het concept protoprofessionalisering te introduceren als predisponerende factor. In hoofstuk 4 wordt de ontwikkeling en validering van een index voor protoprofessionalisering beschreven. De index omvat de elementen 'sociale netwerkstruktuur', 'gezondheidsgerelateerde kennis' en 'beheersingsoriëntatie'.
Het ontwikkelde instrument blijkt goede psychometrische eigenschappen te hebben en het kan de samenhangen tussen protoprofessionalisering en sociaal-demografische variabelen die in eerdere studies zijn gevonden repliceren (Furer en Persoon, 1987; Geurts en Furer, 1992). De samenhang tussen protoprofessionalisering en leeftijd vertoont een omgekeerde U-vorm: het niveau van protoprofessionalisering is het hoogst in de leeftijdsgroep van 25 tot 44 jaar en neemt daarna af. Ook in de jongste leeftijdsgroep (18-24 jaar), de groep die nog niet is 'uitgeleerd', wordt een lagere gemiddelde score gevonden. Van de SES-indicatoren opleidingsniveau, beroepsprestige en inkomen vertoont opleiding de sterkste samenhang met protoprofessionalisering: de hoogste scores worden gevonden onder de hoger opgeleiden. Deze bevinding ondersteunt de suggestie van De Swaan (1979) dat opleidingsniveau een belangrijke determinant is van protoprofessionalisering, en de suggestie van Freidson (1970) dat opleidingsniveau waarschijnlijk de meest bruikbare indicator is voor de mate van overeenstemming tussen de lekencultuur en de professionele cultuur.
Protoprofessionalisering gaat samen met een geringere geneigdheid tot medische consumptie voor alledaagse klachten en met een sterker geloof

in de positieve effecten van gezondheidsgedrag. Wanneer het concept als predisponerende variabele wordt opgenomen in het Andersen model, blijkt protoprofessionalisering samen te hangen met gunstigere gelegenheidsfactoren (particuliere verzekering, hoger inkomen) en met minder behoefte aan zorg (betere gezondheidstoestand).

In hoofdstuk 5 wordt in een multivariate toetsing van predisponerende, gelegenheids- en behoeftefactoren het unieke effect van protoprofessionalisering op het gebruik van huisartsen, specialisten en fysiotherapeuten geanalyseerd. Protoprofessionalisering verhoogt de kansen op het consulteren van een specialist of fysiotherapeut, maar heeft geen effect op huisartsengebruik. De variabele 'geneigdheid tot medische consumptie voor alledaagse klachten' verhoogt daarentegen de kans op huisartsengebruik, terwijl deze variabele geen effect heeft op het gebruik van specialisten en fysiotherapeuten.
In overeenstemming met de onderzoeksliteratuur over het Andersen model, verklaren de gelegenheids- en behoeftefactoren samen de meeste variantie in zorggebruik. Gelegenheidsfactoren spelen een significante rol bij het gebruik van alle drie zorgvoorzieningen: in het geval van huisartsen en specialisten beïnvloedt een persoon's verzekeringsstatus (verzekerd zijn en het hebben van een particuliere verzekering) de kans op zorggebruik, terwijl de kans op het consulteren van een fysiotherapeut wordt vergroot door een hoger inkomen. Dit laatste kan verklaard worden uit het feit dat de meeste ziektekostenverzekeringen op Curaçao alleen een beperkt aantal fysiotherapie consulten dekken. Mensen met een hoger inkomen zullen waarschijnlijk sneller vervolgafspraken maken op eigen kosten.
De behoefte-variabelen zijn belangrijke determinanten van het gebruik van elk der zorgvoorzieningen. Dit was te verwachten, aangezien deze variabelen de meest directe reden voor curatief zorggebruik vormen. De bijdragen van de behoefte-variabelen variëren met het type zorgvoorziening: het hebben van chronische aandoeningen verhoogt de kans op het gebruik van alle drie voorzieningen, maar het hebben van alledaagse klachten heeft alleen invloed op huisartsengebruik.

Effecten van predisponerende variabelen bij variërende behoefte aan zorg

In hoofdstuk 6 wordt de laatste stap in de analyses beschreven. Nagegaan wordt of het belang van sociaal-culturele determinanten van medische consumptie toeneemt wanneer de behoefte aan zorg afneemt. Daartoe zijn sociaal-culturele verschillen in medische consumptie bij alledaagse klachten geanalyseerd en vergeleken met verschillen in hulpzoekgedrag voor meer serieuze chronische aandoeningen. Zowel opleidingsniveau als

protoprofessionalisering zijn gebruikt als indicatoren voor sociaal-culturele achtergrond, en hun effecten zijn geanalyseerd na controle voor geslacht en leeftijd.
De resultaten bevestigen grotendeels de veronderstelling dat sociaal-culturele verschillen in medische consumptie alleen optreden beneden een zeker niveau van ziekte-ernst. Conform onze hypothese zoeken hoger opgeleide en geprotoprofessionaliseerde mensen minder snel hulp voor alledaagse klachten. Daarnaast zijn geprotoprofessionaliseerden eerder geneigd tot zelfmedicatie bij alledaagse klachten. Blijkbaar gaan de *empowerment* en grotere mondigheid van hoger opgeleide en geprotoprofessionaliseerde personen samen met een toename van zelfzorg en met een meer overwogen besluitvorming over welke klachten professionele interventie vereisen. Lager opgeleide en minder geprotoprofessionaliseerde patiënten lijken daarentegen meer geneigd om de verantwoordelijkheid voor hun gezondheid aan artsen over te laten; zij vertonen meer afhankelijkheid bij ziekte.
De onderzoeksuitkomsten geven ook enige ondersteuning aan de veronderstelling dat het verhoogde gezondheidsbewustzijn onder de hoger opgeleiden en geprotoprofessionaliseerden leidt tot een verminderde tolerantie voor symptomen: de zelfgerapporteerde prevalenties van verschillende alledaagse klachten liggen namelijk hoger onder deze groepen.
Wanneer gezondheidsproblemen ernstiger worden verdwijnen de sociaal-culturele verschillen in medische consumptie: opleidingsniveau en proto-professionalisering hebben geen effect op het al of niet zoeken van professionele behandeling voor chronische aandoeningen. Echter, of een persoon die professionele hulp zoekt ook verwezen wordt naar een specialist, wordt niet alleen bepaald door de ernst van de aandoening. Bij vergelijking van patiënten met dezelfde chronische aandoening blijken de sterker geprotoprofessionaliseerden vaker behandeld te worden door een specialist. Een mogelijke verklaring hiervoor is dat, vanwege hun grotere mondigheid en culturele overeenkomsten met de professie, deze patiënten beter zijn toegerust om de huisarts te overtuigen van de noodzaak van een verwijzing.

Discussie

In het laatste hoofdstuk van dit proefschrift wordt een samenvatting gegeven van de belangrijkste onderzoeksuitkomsten en worden deze afgezet tegen internationale onderzoeksbevindingen. De resultaten suggereren dat sociaal-culturele verschillen in medische consumptie niet zijn te verklaren met één conceptueel model. Derhalve worden twee alternatieve verklaringsmodellen voorgesteld die toepasbaar zijn, afhankelijk van de ernst van de behoefte aan zorg en de toegankelijkheid van de zorgvoorziening.

Ook wordt in dit hoofdstuk ingegaan op de waarde van het concept protoprofessionalisering en worden methodologische kanttekeningen bij het onderzoek geplaatst. Tot besluit worden de implicaties van deze studie voor toekomstig onderzoek en voor het gezondheidszorgbeleid besproken.

Vergelijking met internationale onderzoeksbevindingen

De sterke sociaal-economische verschillen in het gebruik van specialisten en ziekenhuizen die in dit onderzoek werden gevonden wijken af van bevindingen in landen zoals Nederland (Van der Meer, Looman en Mackenbach, 1994), Canada (Newbold, Eyles en Birch, 1995) en Finland (Keskimäki, Salinto en Aro, 1995).
In het gezondheidszorgbeleid op Curaçao is getracht gelijke toegankelijkheid van zorg te bereiken door het wegnemen van financiële barrières. Het eiland heeft een gemengd overheids- en particulier systeem van ziektekostenverzekeringen. In de zogenaamde PP (Pro Pauper) regeling wordt gratis gezondheidszorg door zorgverleners in dienst van de overheid geboden aan min- en onvermogende inwoners. Dus in principe zijn er geen financiële barrières in de zorg. Desondanks lijkt de verdeling van gezondheidszorg op Curaçao minder rechtvaardig te zijn dan in de aangehaalde landen. Dit zou in de eerste plaats verklaard kunnen worden door relatief sterke verschillen in andere gelegenheidsfactoren in het Curaçaose gezondheidszorg systeem, namelijk verschillen in de organisatie van het zorgaanbod voor overheidspatiënten en particuliere patiënten. De meeste medisch specialisten zijn parttime in dienst van de overheid ten behoeve van de zorg aan PP patiënten. Naast hun particuliere praktijk hebben zij een beperkt aantal spreekuren voor PP patiënten. Onderzoek heeft aangetoond dat PP patiënten aanmerkelijk langere wachttijden hebben voor een afspraak met een specialist dan particuliere patiënten (Alberts et al., 1996). Dit wordt waarschijnlijk veroorzaakt door een ongunstige specialist-patiënt ratio voor de PP populatie (d.w.z. minder specialisten en/of spreekuren per capita). Bovendien is er geen financiële drijfveer voor specialisten om de wachttijden voor PP patiënten te verkorten; ze ontvangen een vast salaris voor de zorg aan deze groep, ongeacht het aantal patiënten dat ze zien. Toch kan dit niet volledig de gevonden sterke ongelijkheid in specialistengebruik verklaren, want ook wanneer gecontroleerd wordt voor verzekeringstype blijken hoger opgeleiden en geprotoprofessionaliseerden nog steeds eerder naar een specialist te gaan.
Een tweede mogelijke verklaring voor de relatief sterke ongelijkheid in zorggebruik ligt in een andere verdeling van predisponerende factoren in de Curaçaose populatie. Er is sprake van een vrij groot verschil in opleidingsniveau's binnen de bevolking in vergelijking met meer ontwikkelde landen zoals Nederland (Wouters, 1992; Centraal Bureau voor de Statistiek, 1993). Dit impliceert waarschijnlijk dat er ook sprake is van

relatief grote verschillen in de mate van protoprofessionalisering binnen de Curaçaose bevolking, en dat de culturele kloof tussen de medische professie en de minst geprotoprofessionaliseerden groter is. Het lijkt bovendien redelijk om aan te nemen dat een lager opleidingsniveau en een mindere mate van protoprofessionalisering gepaard gaan met een minder 'westerse' oriëntatie onder de inwoners van dit Caribische eiland. Dit zou de culturele kloof met de westerse geneeskunde nog verder kunnen vergroten. Een dergelijke grote culturele afstand tussen professie en lekenpubliek zou mogelijk ook het, in vergelijking met Nederland, lage gebruik van huisartsen door ouderen kunnen verklaren. Zij zijn degenen met het laagste opleidingsniveau, zijn het minst geprotoprofessionaliseerd, en zullen dus waarschijnlijk de sterkste culturele barrières in de toegang tot zorg ervaren.

Verschillende verklaringsmodellen

Zoals Andersen en Newman (1973) al beargumenteerden, is het relatieve gewicht van de diverse determinanten van zorggebruik afhankelijk van het type zorgvoorziening en de reden van gebruik. De uitkomsten van deze studie suggereren echter dat het niet alleen een kwestie is van variaties in het gewicht van de determinanten, maar dat er duidelijk verschillende mechanismen een rol spelen in het proces van hulpzoeken. Er lijkt sprake te zijn van twee alternatieve verklaringsmodellen. Welke van de twee van toepassing is hangt af van:

- de mate van *behoefte* aan zorg (ernst van de aandoening) en
- de *toegankelijkheid* van de zorgvoorziening in kwestie, zowel in termen van ingang (direct toegankelijke eerstelijnszorg versus tweedelijnszorg op verwijzing) als in termen van bekendheid (is het een algemeen bekende zorgvoorziening of zijn alleen degenen die meer kennis hebben van het medisch circuit ermee vertrouwd).

Het gebruik van zorgvoorzieningen wordt primair bepaald door behoefte en gelegenheidsfactoren, dus als de behoefte aan zorg groot is en de zorgvoorziening direct toegankelijk is, zullen er geen sociaal-culturele verschillen zijn in medische consumptie. In het andere uiterste geval, wanneer de behoefte laag is en de zorgvoorziening niet direct toegankelijk is, zal er meestal geen sprake zijn van medische consumptie. Alledaagse klachten zullen bijvoorbeeld niet snel behandeld worden door een specialist. Er blijven derhalve twee modellen over voor de verklaring van sociaal-culturele verschillen in medische consumptie:

1. *geringe behoefte x grote toegankelijkheid*: met afnemende ernst van gezondheidsproblemen, en dus een afnemende betekenis van 'behoefte' is er een toename in de verklarende kracht van een individu's afhankelijkheid bij ziekte, oftewel zijn/haar neiging om professionele hulp te zoeken voor gezondheidsproblemen.

2. *grote behoefte x geringe toegankelijkheid*: wanneer zorgvoorzieningen minder makkelijk toegankelijk zijn, is er een toename van de verklarende kracht van een individu's 'empowerment' oftewel zijn/haar vaardigheid om zich toegang tot de zorg te verwerven.

Beide modellen worden beschreven en uitgewerkt in hoofdstuk 7.

De waarde van het concept protoprofessionalisering

Hoewel protoprofessionalisering sterk samenhangt met opleidingsniveau, geven de onderzoeksresultaten ondersteuning voor het gebruik van beide variabelen als twee aanvullende determinanten van medische consumptie. Het concept protoprofessionalisering lijkt een veelbelovend raamwerk te bieden voor de verklaring van medische consumptie en voor het integreren van tot dusverre op zichzelf staande theoretische benaderingen in het onderzoek naar gezondheidsgerelateerd gedrag. Men zou vraagtekens kunnen plaatsen bij de toepassing van één algemene maat voor protoprofessionalisering. Waarom niet de onderliggende elementen (netwerk, kennis, beheersingsoriëntatie) als afzonderlijke dimensies opnemen in de analyses? Een belangrijk theoretisch tegenargument is dat protoprofessionalisering wordt gezien als een globale oriëntatie die de mate van overeenstemming tussen de lekencultuur en de cultuur van de medische professie uitdrukt. Protoprofessionalisering is gebaseerd op een complex van onderling gerelateerde variabelen die samen de bouwstenen vormen van een algemene manier van omgaan met gezondheid en gezondheidszorg. De protoprofessionaliserings-theorie is in feite op dezelfde holistische benadering gebaseerd als Antonovsky's 'Sense of Coherence' theorie (Antonovsky, 1993).

De variantie in curatieve medische consumptie die wordt verklaard door protoprofessionalisering is vrij klein. Dit hoeft echter niet te duiden op een beperkte verklarende kracht van het concept. Medische consumptie wordt allereerst bepaald door de behoefte aan zorg en door factoren die consumptie mogelijk maken. Pas wanneer de behoefte- en gelegenheidsfactoren een minder prominente rol spelen, wordt het effect van predisponerende variabelen zichtbaar.

Methodologische kanttekeningen

Het Gezondheidsonderzoek Curaçao is een dwarsdoorsnede studie, gebaseerd op retrospectieve data die zijn verzameld door middel van mondelinge interviews onder een aselecte steekproef (n=2248) uit de volwassen niet-geïnstitutionaliseerde bevolking.

De methodologie van gezondheidsonderzoeken is ontwikkeld in West Europa en Noord Amerika. Om een gezondheidsonderzoek in het Caribisch gebied te kunnen doen, diende de methodologie eerst aangepast te worden aan de specifieke omstandigheden van multiculturele samenlevingen met een grote variatie in sociaal-economische strata.

Voorafgaand aan dit onderzoek is daarom een uitgebreide pilotstudie

gedaan om de organisatorische haalbaarheid van het project te bepalen, de validiteit en betrouwbaarheid van de instrumenten te testen, en om de semantische en conceptuele equivalentie van de originele Nederlandse vragenlijst en de vertaalde versies vast te stellen. Als gevolg van dit project is nu een betrouwbaar instrument voor gezondheidsonderzoek onder Caribische populaties beschikbaar. Een ander positief aspect van het onderzoek is het hoge respons percentage (85%) waardoor de steekproef zeer representatief is voor de volwassen niet-geïnstitutionaliseerde bevolking. Dit gegeven, in combinatie met de gedegen en accurate wijze van dataverzameling, rechtvaardigt de conclusie dat de onderhavige studie gebaseerd is op valide en betrouwbare gegevens.

Uiteraard heeft de onderzoeksopzet ook enkele tekortkomingen. Omdat de data zijn verzameld in een dwarsdoorsnede onderzoek is het niet mogelijk enige conclusies te trekken over de richting van de onderzochte verbanden. Het is bijvoorbeeld zeer wel mogelijk dat medische consumptie niet alleen wordt beïnvloed door protoprofessionalisering, maar dat het proces van protoprofessionalisering ook beïnvloed wordt door de ervaringen die men opdoet met de gezondheidszorg.

Het feit dat de medische consumptiecijfers zijn gebaseerd op zelfrapportage kan enige geheugeneffecten veroorzaakt hebben, zoals het vergeten van contacten of het verplaatsen van contacten in de tijd. In navolging van de aanbevelingen van het Nederlandse Centraal Bureau voor de Statistiek (Van den Berg, 1983) zijn de referentieperiodes echter zodanig beperkt dat geheugeneffecten waarschijnlijk geen ernstige bron van verstoring vormen.

Tot slot enkele methodologische opmerkingen over de geconstrueerde index voor protoprofessionalisering. De psychometrische analyses geven bevredigende resultaten en de overeenkomsten met onderzoeksuitkomsten in Nederland (Geurts en Furer, 1992) bevestigen de interculturele validiteit van het concept. In vergelijking met het instrument dat is ontwikkeld in Nederland, dekt het huidige instrument meer aspecten van de 'kennis' en 'beheersingsoriëntatie' dimensies. Een ander verschil is dat op grond van theoretische overwegingen in dit instrument de dimensie 'bereidheid om met anderen over problemen te praten' buiten beschouwing is gelaten, terwijl in het Nederlandse instrument deze dimensie wel wordt meegenomen. Een gemeenschappelijk kenmerk van beide instrumenten dat nadere aandacht verdient is de beperkte betrouwbaarheid van de kennis-schalen. Een mogelijke verklaring waarvoor enige empirische ondersteuning is gevonden, is dat individuen met beperkte algemene gezondheidskennis wel veel kennis kunnen hebben van specifieke aspecten van gezondheid(szorg) als gevolg van hun ziektegeschiedenis en ervaringen met het zorgsysteem. Dit zou de schaalbaarheid van de items doen afnemen, maar zou niet noodzakelijk de validiteit van het instrument reduceren.

Implicaties voor verder onderzoek

Er is nog weinig empirisch onderzoek gedaan naar protoprofessionalisering. Onderzoek naar de psychometrische kwaliteiten van het geconstrueerde instrument onder andere populaties en in verschillende culturen zou meer inzicht kunnen geven in de validiteit en interculturele stabiliteit ervan. Meer onderzoek naar de samenhang tussen protoprofessionalisering en medische consumptie is zeker gerechtvaardigd. Deze studie richtte zich op de incidentie en omvang van curatief zorggebruik. Inzicht in de samenhang tussen protoprofessionalisering en andere meer specifieke aspecten van zorggebruik zou meer licht kunnen werpen op het belang van een individu's sociaal-culturele achtergrond. Te denken valt aan onderzoek naar het effect van protoprofessionalisering op de arts-patiënt communicatie, op besluitvorming door zorgverleners, en op therapietrouw. Longitudinaal onderzoek zou inzicht kunnen geven in de gesuggereerde wederkerigheid in de relatie tussen protoprofessionalisering en medische consumptie.

Met betrekking tot Curaçao is meer inzicht nodig in de effecten van traditionele gezondheidskennis en opvattingen, voortkomend uit deze specifieke cultuur, op de perceptie van gezondheidsproblemen, het daarop volgende hulpzoekgedrag en de interactie tussen patiënten en zorgverleners.

Tot slot zou vergelijkend onderzoek naar de sociaal-culturele determinanten van medische consumptie in andere gezondheidszorgsystemen, met andere financiële en organisatorische barrières in de toegankelijkheid, meer inzicht kunnen geven in de bruikbaarheid van de gesuggereerde verklaringsmodellen.

Implicaties voor beleid

Het bereiken van een rechtvaardige verdeling van gezondheidszorg is in de eerst plaats afhankelijk van een rechtvaardige verdeling van gelegenheidsfactoren (consumptie mogelijkheid), zoals ziektekosten-verzekeringen en aantallen zorgverleners per hoofd van de bevolking. Deze variabelen lenen zich ook gemakkelijker voor beleidsinterventies, in ieder geval op korte termijn, dan predisponerende factoren zoals opleidingsniveau en protoprofessionalisering. Het is echter niet voldoende om te trachten veranderingen te bewerkstelligen in gelegenheidsfactoren zonder aandacht te besteden aan sociaal-culturele factoren. Zelfs in het geval van technisch gesproken volledig gelijke toegankelijkheid van zorg, zullen culturele barrières nog steeds ongelijkheid veroorzaken in het proces van hulpzoeken en behandeling. Patiënten die minder sterke culturele barrières ervaren kunnen een meer gelijkwaardige relatie met zorgverleners aangaan in termen van status, wederzijdse verwachtingen en besluitvorming. Dit vergemakkelijkt het verwerven van toegang tot gewenste diagnostische en behandelingsfaciliteiten.

Er zijn dus sterke argumenten voor een beleid dat zich richt op het overbruggen van de culturele kloof tussen minder geëmancipeerde patiënten en zorgverleners, door enerzijds patiënten te professionaliseren en anderzijds hulpverleners te 'deprofessionaliseren'. Dit geldt zeker voor Curaçao, aangezien de uitkomsten van dit onderzoek suggereren dat de kloof tussen de medische professie en het lekenpubliek relatief groot is. In vergelijking met meer westerse landen lijkt de trend richting democratisering van de arts-patiënt relatie en het mondiger worden van patiënten achter te lopen.
Patiënten dienen toegerust te worden om hun verwachtingen onder woorden te kunnen brengen en met de zorgverlener te kunnen onderhandelen over behandelingsopties. Hoe kan dit worden bereikt? Gezondheidsvoorlichting is één van de beschikbare middelen. Massamedia kunnen ingezet worden om medische kennis te populariseren en voor een breed publiek toegankelijk te maken. Patiëntenverenigingen en belangengroeperingen kunnen een belangrijke rol spelen bij het adviseren en informeren van patiënten over hun rechten en bij het stimuleren van hun mondigheid.
Zorgverleners dienen getraind te worden in de ontwikkeling van sociale- en communicatievaardigheden (bijvoorbeeld het spreken van begrijpelijke taal) en in het betrekken van patiënten in de besluitvorming, zodat zij ook open staan voor de verwachtingen van hun minder mondige patiënten. Eén van de opties om dit op Curaçao te bereiken is door training in sociale vaardigheden op te nemen in het curriculum van de huisartsenopleiding die momenteel wordt opgezet op het eiland. Verpleegkundigen hebben ook een belangrijke rol als 'zorgmanager' en intermediair tussen arts en patiënt; zij dienen tijdens hun opleiding op deze rol te worden voorbereid. Specialisten en de meeste andere zorgverleners volgen hun beroepsopleiding in het buitenland, meestal Nederland. Voor hen, en voor professionals in het veld, zouden bij- en nascholingsactiviteiten ontwikkeld kunnen worden.
Strategieën gericht op het reduceren van de professionele dominantie worden al vele jaren bepleit en toegepast in veel landen. Desondanks kan ook bepleit worden dat er grenzen zijn aan het wenselijke niveau van mondigheid van patiënten. De keerzijde van toenemende mondigheid en emancipatie van patiënten is namelijk het ontstaan van 'consumentisme', een situatie waarin niet de medische noodzaak maar de eisen en wensen van de patiënt bepalen welke zorg verleend wordt. Het resulterende overmatig gebruik van diagnostische en therapeutische faciliteiten drijft niet alleen de kosten van de gezondheidszorg onnodig op, het kan ook leiden tot onnodige ongerustheid over uitslagen van diagnostisch onderzoek en tot schadelijke neveneffecten van overbehandeling.
Welke middelen heeft het beleid om grenzen te stellen aan de ontwikkeling van een dergelijke 'consumentengeneeskunde'? Strategieën gericht op verandering van sociaal-culturele factoren zullen waarschijnlijk niet

succesvol zijn. Het proces van protoprofessionalisering van patiënten kan niet afgeremd worden en het is geen realistische optie om de traditionele paternalistische dokter in ere te herstellen. Oplossingen om op beleidsniveau grenzen te stellen aan consumentisme zullen eerder gevonden kunnen worden in het beperken van de consumptie mogelijkheid, bijvoorbeeld door het type en de hoeveelheid zorg die gedekt wordt door verzekeringen te definiëren, en door het aanbod van zorgverleners en zorgvoorzieningen te beperken. In het Curaçaose gezondheidszorgsysteem zijn diverse structurele en organisatorische factoren aan te wijzen die consumentengeneeskunde in de hand werken. Er is bijvoorbeeld geen vestigingsbeleid voor artsen om de spreiding van particuliere praktijken te reguleren. Dit heeft geleid tot een overschot aan artsen in bepaalde specialismen, hetgeen zowel onderlinge concurrentie als problemen in de taakafbakening richting huisartsen in de hand werkt. Omdat zo'n situatie de neiging tot 'klantenbinding' zal bevorderen, zullen artsen meer ontvankelijk zijn voor eisen van patiënten op het gebied van diagnostische procedures, medicatie en behandeling. Het beleid kan hierin interveniëren door beperkingen op te leggen aan de vestiging van praktijken, gebaseerd op behoeftenramingen, en door maatregelen te nemen gericht op het bewaken en stimuleren van de centrale rol van de huisarts als poortwachter.
Een rechtvaardige verdeling van zorg gaat om *gelijke* toegang tot de gezondheidszorg, maar niet om *ongelimiteerde* toegang. De beperkingen aan het aanbod van gezondheidszorg worden gesteld door de financiële middelen die een samenleving heeft om die zorg te dragen.

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